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ABSTRACTS

FIBERS A

MECHANISM OF FIBER FATIGUE. V. A. Berestnev, T. V. Gatovskaya, V. A. Kargin, and E. Y. Yaminskaya. Khim. Volok. No. 6: 50-52 (1959). In Russian. Through BCIRA 40: 2135 (1960). (3026)

The process of fiber fatigue is treated mathematically, taking as basis the fact that the destruction of the fiber by fatigue is due mainly to the increased number of macro defects present in the fiber originally and also developed during the stress.

MECHANICAL PROPERTIES OF WOOL KERATIN AND ITS MOLECULAR CONFIGURATION. M. Feughelman and A. R. Haly. Kolloid Z. 168, No. 2: 107-117 (1960). Through BCIRA 40: 1939 (1960). (3027)

The relationship between the degree of supercontraction at the end of the first stage and in the finally attainable state of a wool fiber in concentrated lithium bromide, and the mechanical properties of the fiber in these two different states can be explained in terms of a simple structural model. This model stipulates two types of zones of different thermal stability along the microfibrils in wool keratin. One of these zones (about 36% of the microfibrils) unfolds unimpeded by bulky side chains, while the remaining 64% can unfold only after overcoming steric hindrances causing irreversible breakdown of bonds. This zone model can also be used to explain the load-elongation behavior of single wool fibers as well as other mechanical properties, such as creep at and above flow limit and second-order transition temperature, observed for stretched wool fibers in water.

Natural fibers A1

NOTE ON THE EVALUATION OF MESHINESS OF JUTE FIBER REEDS AND AVERAGE FINENESS OF COMBED FIBERS BY GRAVIMETRIC METHOD. S. B. Bandyopadhyay and U. Chatterjee (Indian Central Jute Comm.). (Letter to the editor). J. Textile Inst. 51: T260-T264 (June 1960). (3028)

HEMICELLULOSES OF JUTE FIBER. P. C. Das Gupta (Indian Central Jute Comm.). (Letter to the editor). J. Sci. Ind. Research (India) 19B: 148 (Apr. 1960). (3029)

MORPHOLOGICAL PROPERTIES OF COTTON AND WOOD FIBERS. PART 1. COTTON LINTERS. K. A. Jurbergs. Tappi 43: 554-560 (June 1960). (3030)

Electron microscopic evidence is presented that the cellulose bundles form ridges on the surface of cotton linters and that the surface structure of these fibers is very similar to staple cotton. Electron micrographs. 9 refs.

EFFECT OF FIBER LENGTH ON SINGLE FIBER TENSILE AND RESILIENCE PROPERTIES. L. Rebenfeld and P. K. Way (Textile Research Inst.). Textile Inds. 124: 99-103 (July 1960). (3031)

Single fibers from length groups above and below the mean length from several cotton types were examined, and the dependence of fiber mechanical properties on fiber length are reported. Fiber linear density decreases with fiber length, while the fiber breaking tenacity and elastic modulus increase with fiber length. The fiber breaking extension and toughness increase with length initially and subsequently decrease with increasing fiber length. The fiber resilience characteristics were shown to be dependent upon fiber length for only one of the cottons studied. Graphs, tables, 11 refs.

NO MORE OVERDRIED COTTON! A. Richards. Textile Inds. 124: 135-139 (July 1960). (3032)

The new development in gin drying is a modification of the conventional dryer to permit maintaining the desired uniform output temperature with an incoming temperature so low as not to be injurious. Its essential feature is the by-pass which recirculates the air from the bottom back into the top. The differences between the two dryers are compared and discussed. Diagrs.

STUDIES ON THE STIFFNESS OF SILK FIBERS. PART 5. INFLUENCE OF HYGROSCOPICITY OF SURFACE ACTIVE AGENTS UPON THE STIFFNESS OF RAW SILK. H. Takagi. J. Soc. Textile Cellulose Inds. Japan 16, No. 3: 186-189 (1960). In Japanese (English summary). Through BCIRA 40: 2147 (1960). (3033)

With nonionic surfactants (polyethyleneglycol octylphenol ethers) the hygroscopicity was gradually increased and the absorption by silk was gradually decreased as the degree of polymerization of the ethyleneglycols increased. The hygroscopicity of a cationic surfactant and the absorption by silk were very large, but the treated silk had small hygroscopicity and the rigidity was decreased to some extent.

SEPARATION OF SOME PEPTIDES CONCERNED WITH PHOTOCHEMICAL CHANGES OF FIBROIN FROM ITS PARTIAL HYDROLYSATE. S. Okamoto, T. Nagai, and T. Yamaya. J. Soc. Textile Cellulose Inds. Japan 15, No. 10: 800-804 (1959). In Japanese (English summary). Through BCIRA 40: 2149 (1960). (3034)

The peptides that turned brown on exposure to sunlight contained both tyrosine and glutamic acid; the peptide that turned bright yellow was the only one containing tryptophan; some of the unchanged peptides contained tyrosine. Two abnormal peptides were separated from the hydrolysate of the insoluble part of irradiated silk: one contained much dihydroxyphenylalanine; the possibility of cross-linking between this and serine residues is discussed.

FIBER YIELDING WEEDS OF BOMBAY AND ITS SUBURBS. PART 4. (a) CORCHORUS OLITORIUS LIN., (b) CORCHORUS CAPSULARIS LIN., (c) CORCHORUS ACUTANGULUS LAMK. S. M. Betrabet and B. S. Navalkar. Indian Textile J. 70: 374-376 (Apr. 1960). (3035)

Chemical and physical properties were investigated in an attempt to find a jute substitute. Tables, 9 refs. For part 3, see abstr. 4002/58.

MICROSCOPICAL, MICROCHEMICAL, AND PHYSICAL CONTRIBUTIONS TO THE EXTERNAL AND INTERNAI STRUCTURE OF WOOL. R. Ritter. Z. ges. Textil-Ind. 62, No. 6: 193-198; No. 7: 243-246 (1960). In German. Through BCIRA 40: 2151 (1960). (3036)

Literature on the fine structure of wool from the physical and chemical viewpoint is critically examined to explain the development and nature of the bilateral structure.

EFFECT OF SOME REACTIVE DYES ON THE DIMENSIONAL STABILITY OF WOOL FIBERS TREATED UNDER STRESS IN BOILING WATER. A. Vassiliadis (Univ. Athens). (Letter to the editor). J. Soc. Dyers Colourists 76: 355 (June 1960). (3037)

Wool fibers dyed with some Procion and Cibacron reactive dyes, and then treated in boiling distilled water under stress are stabilized to such an extent as to eliminate contraction almost entirely. However, a set similar to the one obtained with untreated fibers is eventually achieved. Graphs, 3 refs.

Manmade fibers A2

FIBER DATA SHEETS: POLYAMIDE FIBERS. PART 2. RILSAN (FROM POLYAMIDE II). P. A. Koch. Z. ges. Textil-Ind. 62, No. 7: 239-242 (1960). In German. Through BCIRA 40: 2033 (1960). (3038)

The data on Rilsan-type fibers comprise definitions and trade names, inventors and development, raw materials, manufacturing methods, chemical constitution, properties, forms of the products available, uses, and master patents. 27 refs.

POLYAMIDES AND POLYESTERS. J. W. S. Hearle. Textile Mfr. 86: 217-222 (June 1960). (3039)

The article, which is mainly concerned with nylon 66 and Terylene, reviews the constitution, production, properties, and uses of both filament and staple fibers, as well as processes for modifying continuous filament yarns. Photos, photomicrographs, diagrs, graphs, tables.

DYNAMICS OF TEXTILE MATERIALS. PART 5. VISCOELASTICITY OF VISCOSE RAYON IN WATER AT VARIOUS TEMPERATURES AND EXTENSIONS. K. Shirakashi, N. Oguchi, and H. Kaneko. J. Soc. Textile Cellulose Inds. Japan 15, No. 11: 868-872 (1959). Through BCIRA 40: 1934 (1960). (3040)

The dynamic tensile Young's modulus and internal viscosity were measured by the free vibrational method. The viscoelasticities are linear at low extensions but non-linear at high extensions. At low extensions the dynamic viscosity decreases with increasing temperature (25-50° C) but does not change between 50 and 100° C. The dynamic modulus is not temperature dependent.

FINDING THE FACTS ON MANMADE FIBERS. PART 2. M. Dean (Brit. Rayon Research Assoc.). Skinner's Silk & Rayon Record 34: 666, 668 (July 1960). (3041)

Concluding section of a two part survey of literature sources on manmade fibers. 50 refs.

TERYLENE: A FIBER WITH FASHION SENSE. Skinner's Silk & Rayon Record 34: 656-660 (July 1960). (3042)

Review of the latest apparel uses of Terylene. Swatches.

ALKALI TREATMENT OF TETORON POLYESTER FIBER. PART 2. OBSERVATIONS ON THE MECHANISM OF SOLUBILITY OF TETORON IN AQUEOUS OR ALCOHOLIC ALKALINE SOLUTION. T. Hashimoto. J. Soc. Textile Cellulose Inds. Japan 15, No. 10: 794-799 (1959). In Japanese (English summary). Through BCIRA 40: 2119 (1960). (3043)

LOW SHRINKAGE YARNS OF ORLON. E. I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. July 1960. 2 p. Bull. OR-105 (replaces Bull. OR-96). Free. (3044)

Suggestions for avoiding variable shrinkage in spun yarns.

FIBER DIMENSIONS OF CERTAIN PHILIPPINE WOODS, BAMBOOS, AGRICULTURAL CROPS AND WASTES, AND GRASSES. PART 3. F. N. Tamolang and others. Tappi 43: 527-534 (June 1960). (3045)

X-RAY STUDIES ON POLYVINYL ALCOHOL FIBER. PART 1. CRYSTALLINITY AND ORIENTATION OF POLYVINYL ALCOHOL FIBERS. PART 2. RELATION BETWEEN THE CRYSTALLINITY AND THE SWELLING OF HEAT STRETCHED AND RELAXED POLYVINYL ALCOHOL FIBERS. H. Kawakami, N. Mori, H. Sato, and A. Miyoshi. J. Soc. Textile Cellulose Inds. Japan 16, No. 3: 155-162 (1960). In Japanese (English summary). Through BCIRA 40: 2143 (1960). (3046)

Part 1. Fibers that had been stretched and heat treated under various conditions were examined; x-ray counter methods were used. The effect of temperature of heat treatment on crystallinity was greater than that of time of heat treatment. Tensile properties and dye absorption were also measured and are discussed. Part 2. The degree of crystallinity increased with increasing draw ratio, but the swelling of the fibers in water did not always depend solely on the crystallinity.

MECHANICAL PROPERTIES OF KANEKALON (VINYL CHLORIDE-ACRYLONITRILE COPOLYMER FIBERS). S. Yamaguchi and K. Oyanagi. J. Textile Machy. Soc. Japan 13, No. 3: 169-176 (1960). In Japanese (English summary). Through BCIRA 40: 1938 (1960). (3047)

Tensile, creep, and recovery behavior were studied at different temperatures and humidities, and expressed quantitatively as for other fibers; general creep and recovery formulas are, on the whole, applicable. The effect of temperature is remarkable, but of humidity slight.

YARN PRODUCTION B

SPINNING OF ARTIFICIAL AND SYNTHETIC FIBERS ON COTTON EQUIPMENT. PART 3. Rayonne et Fibres Synthet. 16, No. 3: 295-309 (1960). In French. Through BCIRA 40: 1834 (1960). (3048)

Problems encountered in processing artificial (viscose rayon staple, Cupro, cellulose acetate, and regenerated protein) and synthetic (polyamide, acrylic, polyester and chlorinated) fibers during opening, picking and carding are discussed, with reference to the best type of equipment to be used.

POLYNOSIC FIBER Z 54 IN SPINNING. P. Desmet. Rayonne et Fibres Synthet. 16, No. 3: 237-244 (1960). In French. Through BCIRA 40: 1835 (1960). (3049)

Following an article in which the main properties of the fiber were discussed (2697/60), this paper refers to spinning of Z 54, alone and in blends with cotton, on cotton equipment; limits of spinnability; optimum twist of the yarn; mechanical properties of 100% Z 54 yarn and of 50/50 Z 54/cotton blends; use of Z 54 fiber in blends with other natural and with synthetic fibers; available types, and special characteristics.

SPINNING OF CHEMICAL FIBERS BY THE DIRECT OR BY THE CONVERTER SPINNING METHODS. W. Mey. Deut. Textiltech. 10, No. 2: 53-58; No. 3: 119-130 (1960). In German. Through BCIRA 40: 1836 (1960). (3050)

The terms converter and direct spinning are defined, and the technical features of the two processes are briefly discussed. All important details referring to the converter and direct spinning systems in use are given in tabulated form and in illustrations. The properties of the material to be used for the tow and sliver preparation and those of the yarn produced are discussed in detail, and the author's own experiences with the Cutdrafil ring spinning machine are described. Reference is also made to the economical aspects of the new spinning processes.

EFFECT OF GENERAL PREPARATION ON THE HOMOGENIZATION AND NEPPINESS OF COTTON BLENDS. Centre de Recherches des Industries Textiles de Rouen. Bull. Inst. Textile France No. 85: 73-99 (Dec. 1959). In French. Through BCIRA 40: 1829 (1960). (3051)

The degree of homogenization during various stages of preparation (opening, cleaning, picking, carding) was studied on 8 different cotton blends as a function of the material processed and the general characteristics of the machinery used. The effect of cleaning and picking on the number of neps was also examined. A description is given of the method used for nep counting, and the effect of various opening and cleaning machines on the neppiness, the characteristics of fibers and yarns, and the cleaning efficiency of various types of openers are discussed.

Carding and combing B2

EVENNESS OF YARN WEIGHTS: HOW TO CONTROL VARIATIONS IN WOOLEN ROVINGS. W. J. Crofts. Wool Record 97: 1711-1713 (June 24, 1960). (3052)

The requirements for production of good roving on a woolen carding machine.

CONVERSION OF AN ORDINARY COMBER INTO A HIGHER PRODUCTIVE COMBER. O. K. Mahajan and G. T. Bhendale. Indian Textile J. 70: 442-444 (May 1960). (3053)

Combers are given a "firm grip" over the cotton sheet by the nippers by means of a specially constructed "nipper presser" on the top and bottom nipper rods. Diagrs, table.

MODERN LAP PREPARATION AND COMBING. F. Greenhalgh (A. E. Aspinall Ltd). Textile Weekly 60 (1): 1496, 1499-1500 (June 17, 1960). (3054)

Recommendations for draft distributions on the Whitin Evendraft drawframe used in conjunction with the Super Lap machine are given, and operational details of the latter described. The reasons for the development of the Whitin J5 and J6 combers and their features are discussed. Photo, diagr.

METALLIC CARD CLOTHING IN COTTON CARDING. B. Schaffer (Textile Research Inst., Budapest). Textile Recorder 77: 52-54 (June 1960). (3055)

Differences between flexible wire and rigid metallic card clothing with respect to sliver weight variation, nep count, effects on processing, and processing costs are considered. Graphs, tables.

CONTINUOUS CONTROL OF SLIVER WEIGHT. PART 2. F. Murakami and K. Hosotsuji. J. Textile Machy. Soc. Japan 13, No. 3: 163-168 (1960). In Japanese (English summary). Through BCIRA 40: 1831 (1960). (3056)

An automatic sliver weight control device for use in balling sliver fed to a worsted card has been developed and studied. It is based on the open-loop principle and is capable of eliminating not only sliver weight variations (wave length more than 2 m) but also most of the long term variations caused by operation of scale pans and moisture variations.

Drawing and roving B3

RELATIONS BETWEEN FIBER ORIENTATION AND TENSILE STRENGTH OR ELONGATION OF SLIVERS. PART 1. K. Fujino and W. Itani. J. Textile Machy. Soc. Japan 13, No. 2: 89-98 (1960). In Japanese (English summary). Through BCIRA 40: 1491 (1960). (3057)

As degree of orientation increases, the tensile strength increases (a functional relation has been found) and the elongation decreases (the difference between elongation and shape elongation increases as the number of passages through the drawframe increases). Formulas (Löfgren and Lipowsky) for degree of fiber orientation have been examined in relation to cotton and rayon staple slivers. The tensile strength or elongation of twisted slivers increases in proportion to shape elongation.

PRINCIPLES OF ROLLER DRAFTING. A. E. De Barr (Brit. Cotton Ind. Research Assoc.). Textile Mfr. 86: 223-226 (June 1960). (3058)

The fundamental principle of roller drafting, the conditions which must be fulfilled for drafting to take place, and the factors affecting sliver uniformity during drafting are discussed. Diagr, graphs.

POSSIBILITY OF USING HIGH DELIVERY SPEEDS ON COTTON DRAWFRAMES. W. Jablonski and Z. Kozlowski. Przeglad Wlok. 13, No. 11-12: 569-572 (1959). In Polish. Through BCIRA 40: 1830 (1960). (3059)

Investigations into the effect of the delivery rate of preliminary and final drawframes on the irregularity of slivers, roving, and yarn from cotton and viscose rayon staple fibers showed that on standard-type drawframes the delivery rate can be successfully increased to up to 40-50 m/min.

REGULATING SYSTEMS FOR THE EQUALIZATION OF SLIVERS. PARTS 15 AND 16. EXAMINATION OF PRACTICALLY DESIGNED SLIVER EQUALIZATION SYSTEMS AND THEIR EVALUATION FROM THE VIEWPOINT OF CONTROL AND REGULATING TECHNOLOGY. W. Wegener and H. Bechlenberg. Textil-Praxis 15, No. 3: 259-266; No. 4: 378-383 (1960). In German. Through BCIRA 40: 2060 (1960). (3060)

A method for examining already operating sliver equalization systems is described, by means of which it is possible to determine and compare the time behavior of the regulating device used. Special reference is made to the basic design of the sine indicator (indicating the sinusoidal change of the scanning roller movement) and measuring device, the principles of examining the frequency response of sliver controlling devices and the determination of the phase-displacement angle. The qualitative evaluation of various sliver regulating systems is discussed. 35 refs. For previous parts see abstr. 1837/60, 1838/60, and 2285/60.

Spinning, winding, twisting B4

CONTINUOUS TWISTING MACHINE. G. Copp. Industrie Textile: 171-172 (Mar. 1960). In French. Through BCIRA 40: 2070 (1960). (3061)

The high speed machine (J. Hanrez, Montceau-sur-Sambre, Belgium) is described and illustrated.

PHANTOM DRAFTING SYSTEM: HOW IT WAS DEVELOPED AND RESULTS OF MILL TESTS. B. C. Cole (Cole Eng. Co.). Textile Inds. 124: 113-117 (July 1960). (3062)

The superior performance of the Cole Phantom system is believed due in part to 4 characteristics: (1) the sealed and nonchoking top rolls, (2) the uniform tension on short bottom aprons, (3) uniform weight and weight distribution, and (4) freedom from adjustments which are subject to human error. Features are described and mill performance data presented. Photos, diagrs, graphs.

HIGH PRODUCTION WOOLEN RING FRAME. Ateliers Houget SA. Textile Recorder 77: 69, 71 (June 1960). (3063)

The R. T. F. ring spinning frame is suitable for spinning all types of woolen yarns from long or short fibers, and yarns from cotton waste, manmade fibers, asbestos, hairs and blends of all kinds. A special feature of the machine is the spindle tip twisting device which results in a considerable decrease in tension between the spindle tip and the front rollers permitting higher spindle speeds with considerably reduced end breakages and more compact winding.

OPTIMUM TREATMENT OF SYNTHETIC RUBBER TOP ROLLER COTS FOR THE COTTON RING SPINNING MACHINE. K.-H. Banke. Deut. Textiltech. 10, No. 3: 121-124 (1960). In German. Through BCIRA 40: 2065 (1960). (3064)

Work involved in the production of rollers is analyzed, and directions are given for the optimum treatment of synthetic rubber top roller coverings for cotton ring spinning machines. The mounting elongation, the grinding technique, and the defects due to faulty setting of the grinding machines are discussed, the importance of the grinding process is stressed, and problems of varnishing the top roller cots are outlined. Reference is also made to the necessity of methodical control of top roller sets on ring spinning machines.

SYNTHETIC TOP ROLLER COVERINGS WITH VARIOUS SURFACES IN COTTON SPINNING MILLS. H. Paul and J. Uhlig. Deut. Textiltech. 10, No. 3: 125-127 (1960). In German. Through BCIRA 40: 2066 (1960). (3065)

Experiments with synthetic spinning roller cots are reported and directions are given, concerning the grinding technique in roller manufacture. Varnishing of the surfaces does not give satisfactory results; the use on the roller-grinding machine of grinding cloth with different granulation is of greater advantage than the use of emery paper.

LAP FORMATION ON COTTON RING SPINNING MACHINES WHEN USING SYNTHETIC ROLLER COVERINGS. H. Perner. Deut. Textiltech. 10, No. 3: 118-120 (1960). In German. Through BCIRA 40: 2067 (1960). (3066)

The effect of synthetic spinning roller covering on the number of thread breakages, lap formation, the running time between two successive grindings, life time, and treatment of the covering (stretching during mounting, grinding, powdering) is discussed. The lapping frequency per 1,000 spindle hours is suggested as a measuring unit for the lap formation, and it is shown that the latter can be considerably reduced by the use of an accurate grinding plan.

TOP ROLLER CARRYING AND WEIGHTING ARM FOR SPINNING MACHINE DRAFTING SYSTEMS. O. Heimeran. Textil-Praxis 15, No. 4: 383-386 (1960). In German. Through BCIRA 40: 2068 (1960). (3067)

Various constructions, developed by Stahlecker (Ger. Pat. 704 055 and U. S. P. 2 246 474), Johnson (U. S. P. 1 396 122), Vales (U. S. P. 1 130 220), Rieter (Ger. Pat. 723 471 and 932 955), Mann (Ger. Pat. 883 107), and Hess (U. S. P. 2 353 338), are described and illustrated.

MODERN SPINNING DEVELOPMENTS. F. Greenhalgh (A. E. Aspinall Ltd). Textile Weekly 60 (1): 1569-1570, 1581 (June 24, 1960). (3068)

Features, operation, and productivity of the Whitin K (Piedmont) frame are discussed. Photos.

Yarns B5

STUDIES ON PAPER YARN. PART 20. STRESS AND STRAIN IN PLATE-TWISTING. K. Yamada. J. Soc. Textile Cellulose Inds. Japan 15, No. 10: 829-832 (1959). In Japanese (English summary). Through BCIRA 40: 2073 (1960). (3069)

STUDIES OF JAPANESE PAPER YARN. PART 21 & 22. LIMIT OF YARN TWIST. K. Yamada. J. Soc. Textile Cellulose Inds. Japan 15, No. 11: 887-896 (1959). Through BCIRA 40: 1944 (1960). (3070)

Twisting of a staple yarn, 50% saturated with water, was examined. When the twist tension is small the yarn is doubly twisted. At this stage there is a linear relation between twist tension, shrinkage, and count. Relations for limiting twist angle are derived.

STUDIES ON PAPER YARN. PART 26. TWISTING PROPERTY OF SYNTHETIC RESIN FILM. K. Yamada. J. Soc. Textile Cellulose Inds. Japan 16, No. 3: 197-202 (1960). In Japanese (English summary). Through BCIRA 40: 2074 (1960). (3071)

The twisting behavior of vinyl tape was studied and compared with paper yarn.

MECHANICAL PROPERTIES OF MULTIFILAMENT YARNS. PART 1. CHANGE IN DIAMETER BY TWISTING. PART 2. SHRINKAGE OF YARN LENGTH BY TWISTING. G. Osawa and I. Matsumoto. J. Soc. Textile Cellulose Inds. Japan 14, No. 9: 610-616 (1958). In Japanese (English summary). Through BCIRA 39: 148 (1959). (3072)

Part 1. Nylon, Vinylon, and Saran yarns (380, 400, and 1,800 denier/100 and 120 filaments; and 30-300 filaments) were twisted and examined under various loads (0.01316-0.263 g/denier). A mathematical formula relating diameter to twist, denier, specific gravity, and load is derived. Part 2. An expression for yarn contraction is derived from tests on nylon multifilament yarns.

MECHANICAL PROPERTIES OF MULTIFILAMENT YARNS. PART 3. TWISTING MOMENT OF MULTIFILAMENT YARNS. G. Osawa and I. Matsumoto. J. Soc. Textile Cellulose Inds. Japan 15, No. 11: 873-877 (1959). In Japanese (English summary). Through BCIRA 40: 2154 (1960). (3073)

Nylon yarns were tested. Under heavy loads, and with many filaments, the experimental results agree with theory, but under loads less than 0.1 g/denier there is no agreement.

STUDY ON THE STRUCTURE OF BLENDED YARNS. PART 8. RELATION BETWEEN THE TWIST AND THE STRENGTH OF BLENDED YARNS FROM COTTON AND RAYON STAPLE FIBERS. S. Ueno. J. Soc. Textile Cellulose Inds. Japan 15, No. 11: 878-886 (1959). In Japanese (English summary). Through BCIRA 40: 2153 (1960). (3074)

The spinning efficiency of blends is lower than that of the single component yarns (the 50/50 blend showed the lowest spinning efficiency); it is highest when twist for maximum strength is used, and the effect of twist is greater in blends with a higher proportion of staple fibers.

SOME SOLUTIONS CONCERNING PROBLEMS OF HANDLING AND TRANSPORT OF YARNS IN THE TEXTILE INDUSTRY. Bull. Inst. Textile France No. 85: 133-137 (Dec. 1959). In French. Through BCIRA 40: 1957 (1960). (3075)

Reference is made to new means for collecting and transporting bobbins, procedures for accelerating the transport, and rationalization of packaging.

RETRACTABLE BOBBIN FOR STEAMING OF SYNTHETIC FIBER THREADS. Soc. Industrielle Allegro SA. Textile Merc. 142: 824 (June 17, 1960). (3076)

A removable support permits the collapsible shell of the Allegro bobbin to contract in proportion to yarn shrinkage during steaming. Photo.

MECHANICAL BEHAVIOR OF STRETCH YARNS. K. Kawasaki and S. Murata. J. Soc. Textile Cellulose Inds. Japan 15, No. 10: 814-823 (1959). In Japanese (English summary). Through BCIRA 40: 2155 (1960). (3077)

Load-extension curves are analyzed, using a simplified equation developed from Holdaway's helical-spring model for a wool fiber (J. Textile Inst. 47: T586/56).

PRODUCTION OF VOLUMINOUS YARN. I. S. Margolin, Z. S. Bunareva, and N. A. Raguzina. Khim. Volok. No. 6: 53-55 (1959). In Russian. Through BCIRA 40: 2072 (1960). (3078)

Experiments are described in which bulked yarns from synthetic staple fibers were produced on the usual cotton spinning equipment, using blends from high- and low-shrinking fibers. Best results were obtained by blending Lavsan or Nitron fiber with an acrylonitrile/vinyl acetate copolymer fiber. The thermo-relaxation treatment can be effected both on the yarn and the knitted fabric produced from it.

FABRIC PRODUCTION C

Warping, slashing, yarn preparation C1

TENSION OF VISCOSE AND NYLON YARNS IN THE RUNNING STATE. PART 3. CONTROL EFFECT OF A TENSION SPRING. M. Maeda and T. Yamaguchi. J. Textile Machy. Soc. Japan 13, No. 3: 177-189 (1960). In Japanese (English summary). Through BCIRA 40: 1854 (1960). (3079)

When the frequency of longitudinal yarn vibration due to external force is lower than the natural frequency of the tension spring, the spring effect can be approximately expressed by a linear feed-back circuit depicting the relationship between elongation and tension. The resonant curve of the tension spring is represented by a linear equation. When the frequency of elongational oscillation approaches the resonant frequency, the maximum tension occurs by the resonance of the tension spring.

FAULTS IN VISCOSE WINDING. F. B. Scales (Brit. Enka Ltd). Man-Made Textiles 37: 47, 49 (June 1960). (3080)

Defects occurring in the winding of cones and pirns and their elimination are discussed.

AUTOMATIC CHEESE WINDING MACHINE FOR RUBBER AND WIRE-COVERING INDUSTRY. Cezoma Textile Machy. Ltd. Textile Weekly 60 (1): 1564 (June 24, 1960). (3081)

Each spindle has tension control and stop motion and a maximum of four ends per spindle can be wound, while a special thread guide allows the ends to lie side by side on the assembled cheese. Photos.

PROBLEM OF CORNIFICATION OF PROTEIN SIZES. A. Agster. Textil-Praxis 15, No. 4: 407-410 (1960). In German. Through BCIRA 40: 2083 (1960). (3082)

Quantitative protein determination by the Kjeldahl method, the effects of high drying temperatures and of singeing on protein-based sizes, the possibility of reducing the residual protein content, and the difficulties caused by protein sizes during finishing and their elimination are discussed. The latter arise only from the addition of paraffin or tallow to the sizing liquor or as a result of omitting enzymatic desizing in the case of starch/protein combinations.

H. S. TENSION/STOP MOTION UNIT. H. Stanier & Co. Ltd. Textile Merc. 143: 21, 24 (July 1, 1960). (3083)

The H. S. tension/stop motion unit is designed to give maximum control over the yarn in the creel, while exerting the lowest possible tension. Performance under mill conditions has illustrated the value of the device as an aid to warping, particularly where unthrown synthetic yarns are processed. Features, operation, and advantages are described. Photo.

CHARTS FOR ESTIMATING YARN REMAINING ON DU PONT NYLON TRICOT BEAMS. E. I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. June 1960. 3 p. Bull. N-131. Free. (3084)

WEAVE BEAMS OF DU PONT RAYON. E. I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. July 1960. 7 p. Bull. R-41 (replaces Bull. R-35). Free. (3085)

Details on beam and rack dimensions, beam band-off, wrapping, identification and other information helpful to the user. Also information on handling, storing, and shipping beams and racks.

Weaving C2

DIRECTIONS FOR SETTING AND OPERATION OF AUTOMATIC LOOM ESIV WITH SETTING GAGES. E. Liebscher. Deut. Textiltech. 10, No. 3: 131-135 (1960). In German. Through BCIRA 40: 2077 (1960). (3086)

The use of suitable setting gages for adjusting the shuttle boxes, the knocking-off motion, the picking tappet, the feeler motion, the bobbin-change motion, the check strap, and the warp-protector cutter is discussed. This setting and control method can be also applied to other automatic weaving machines and looms.

JET LOOMS. PART 1. PRELIMINARY EXPERIMENT ON GLASS NOZZLES. M. Uno, T. Ishida, K. Matsui, and T. Arakawa. J. Textile Machy. Soc. Japan 13, No. 3: 157-162 (1960). In Japanese (English summary). Through BCIRA 40: 1860 (1960). (3087)

Yarn was propelled by air jet from glass nozzles and the behavior observed. A simple tapered nozzle seemed best. The yarn ran further if the thread guide was pushed out of the nozzle. The yarn speed was roughly equal to that of a shuttle. Flattening of the yarn was considerable and increased rapidly beyond a certain limit (about 40 in.). It would appear unnecessary to circulate the jet stream to prevent the yarn untwisting.

WARP BRAKES. M. Beznicki and J. Szosland. Przeglad Wlok. 13, No. 11-12: 572-583 (1959). In Polish. Through BCIRA 40: 1862 (1960). (3088)

Warp brakes with hand-operated and automatic tension control are reviewed, and a method is described for calculating the static tensions caused by brakes. The mechanism of hand-operated tension control and the course of dynamic tensions are also discussed.

PROBLEM OF SHUTTLELESS LOOMS. M. Beznicki. Przeglad Wlok. 13, No. 11-12: 583-589 (1959). In Polish. Through BCIRA 40: 1859 (1960). (3089)

The characteristic features of gripper, jet propelled, and wire looms are described, and the factors limiting the efficiency of shuttle looms as compared with shuttleless constructions are discussed, with special reference to the development potentialities of the latter.

AUTOMATIC PIRN CHANGING LOOM. Butterworth & Dickinson Ltd. Textile Recorder 77: 73 (June 1960). (3090)

The model AL 4 is a conventional rotary magazine bobbin changing automatic to which an automatic negative letoff motion on the Shirley pattern is fitted.

DAUTRICOURT CIRCULAR WEAVING MACHINE. S. S. Samuels. Textile Weekly 60 (2): 35-36 (July 1, 1960). Textile Merc. 143: 10-11 (July 1, 1960). (3091)

The loom is claimed to be capable of weaving over half of all the cloths producible by conventional means, ranging from coarse to very fine. There can be up to 8 shuttles revolving at 40 rpm and giving approximately 1 hr of continuous weaving. Each warp thread is individually tensioned. This allows for maximum strain during shedding and beatup and also compensates for any tension differences which may arise due to variations in yarn length from warp beam to heddles and cloth fell around the machine. Normal warp beams are used.

CONSTANT WARP TENSION DURING WEAVING. L. Caffin. Industrie Textile: 197-198 (Mar. 1960). In French. Through BCIRA 40: 2080 (1960). (3092)

Owing to the mechanism of the device described, the tension of all threads has the same constant value, the friction of the threads in the heddle eyelets and in the shed is very small, and it is possible to choose the size of the shed angle, as desired. The new technique also permits formation of two or several sheds simultaneously, so that for weaving carpets or tubular fabrics, for example, it is possible to insert at the same time one or several weft threads.

LOOM FOR WEAVING FISHING NETS. Porlester Ltd. Man-Made Textiles 37: 90-91 (June 1960). (3093)

VELOCITY AND ACCELERATION OF THE SHUTTLE. P. Dubach. Textil-Praxis 15, No. 4: 399-403 (1960). In German. Through BCIRA 40: 2078 (1960). (3094)

Measurement of shuttle velocity and the possibility of determining acceleration and retardation of the shuttle movement are described to show the importance of these factors during weaving.

WARP BEAM REGULATOR FOR BUCKSKIN LOOMS. H. Schieblich. Deut. Textiltech. 10, No. 3: 136-138 (1960). In German. Through BCIRA 40: 2079 (1960). (3095)

The mechanism of a new warp beam regulating device (constructed under license by VEB Webstuhlbau Karl-Marx-Stadt) is described. Without readjustment, the device maintains constant the warp tension throughout the weaving process. In the case of warp tension variations, the oscillating back rest acts on a switch to operate a motor which, through a reducing gear, rotates the warp beam. The motor runs in two directions according to whether the warp is delivered or drawn off.

GAGES IN DRAPER LOOM MAINTENANCE. PART 6. ESTABLISHING A FRAMEWORK FOR PREVENTIVE MAINTENANCE. Textile Inds. 124: 121-123 (July 1960). (3096)

COMPUTING SHUTTLE SPEED AND THE AMOUNT OF WORK DONE PER PICK. C. M. Mehta. Indian Textile J. 70: 437-440 (May 1960). (3097)

Knitting C3

HOW TO KNIT AGILON HOSIERY. R. Edge. Textile Inds. 124: 142-147 (July 1960). (3098)

The characteristics of Agilon yarn in hosiery and procedures for knitting seamless and full-fashioned hosiery, finishing, and testing are described.

COMPARISONS OF PRODUCTION METHODS. Hosiery Trade J. 67: 1-29 (suppl., July 1960). (3099)

Are you out of line? by A. Kershaw, p. 3-8; Ancillary operations: women's stockings, by G. C. Battye, p. 8-10; More stitches in the hour, by F. F. Chance, p. 11-12; Work study: a realistic approach to a production problem, by J. Lees and W. J. Rench, p. 13-16; Moving belts, by G. C. Battye, p. 16-17; Positive feed applied to circular hose and half hose, by P. Stacey and J. Hopkinson, p. 17-19; Production planning and control, by L. G. Hawkins, p. 19-23; Working round the clock: a panel discussion, by R. B. Simpson, P. Pendergast, and A. Kershaw, p. 23-26; Standard minutes in practice, by V. Whyte, p. 26-27; The fixer system, by M. B. Hughes and H. W. Page, p. 27-29.

BANDAGE PRODUCTION BY WARP KNITTING. Textile Recorder 77: 65 (June 1960). (3100)

The findings of investigations into the possibilities of producing open structure fabrics for the bandage trade on F.N.F. compound needle high speed warp knitting machines.

KNITTING POSSIBILITIES WITH THREE NEEDLE FRAMES. J. B. Lancashire. Knitted Outerwear Times 29: 11, 24, 26 (July 4, 1960). (3101)

Knitting possibilities on the Universal Suprafix Z three-bed.

LEBOCEY INTRODUCES "DOUBLE JERSEY" CIRCULAR MACHINE MODEL MACDET. Georges Lebocey & Cie. Knitted Outerwear Times 29: 21, 29 (Aug. 1, 1960). (3102)

WARP-KNIT STRUCTURE MODELS. Brit. Rayon Research Assoc. Textile Weekly 60 (1): 1508-1509 (June 17, 1960). (3103)

A useful aid to the assessment of the curling properties and thread configurations of warp knit fabrics is to make a greatly magnified model of the fabric using a large pegboard. Diagrs.

WARP-KNITTED NYLON SHIRT FABRICS. Brit. Nylon Spinners Ltd. Textile Weekly 60 (1): 1503-1504 (June 17, 1960). (3104)

Some suggestions on fabric constructions suitable for shirtings, taking as their basis the need to achieve good standards in opacity, handle, stability, and resistance to snagging and abrasion are given.

DOUBLE JERSEY FABRICS FOR TAILORED KNITWEAR. J. B. Lancashire. Textile Recorder 78: 54-55, 57 (July 1960). (3105)

The production techniques used in the manufacture of various types of double jersey fabrics, e.g. interlock, tuck interlock, bourrelet, eightlock, and double pique, are described. Photos, diagrs.

EUROPEAN KNITTING DIARY. R. Innes. Hosiery Trade J. 67: 107-110 (June 1960). (3106)

Among the developments described are: Colcesa warp knitted velour; adaptation of interlock machines for Overnit structures; Schmidt yarn speed meter; and an East German machine for laid-in and fleecy fabrics. Photos, diagrs.

SHAPING OF RIBBED FABRICS. J. B. Lancashire. Hosiery Trade J. 67: 88-90 (June 1960). (3107)

Shaping by narrowing or widening on V-type flat machines and Cotton's Patent machines is surveyed. Photos.

KNITTING RACKED RIB FABRICS ON CIRCULAR MACHINES. Hosiery Trade J. 67: 102-103 (June 1960). (3108)

As a necessary condition for producing racked effects on ordinary cylinder and dial machines there must be a needle distribution which leaves certain tricks empty in both cylinder and dial, and some of these empty tricks must coincide with the positions of the needle clearing cams at the various feeders whenever racking takes place. The method is described and illustrated. Photos.

NOVEL METHOD OF LOOP CONSTRUCTION. H. N. Smith and A. S. Roberts (Brit. Rayon Research Assoc.). Hosiery Trade J. 67: 80-84 (July 1960). (3109)

The versatility possible with the use of an experimental bifurcated loop holder developed by the B.R.R.A. is demonstrated. Photos, diagrs, table.

LEBOCEY TB57 BERET KNITTING MACHINE. G. Lebocey & Cie. Hosiery Trade J. 67: 118-119 (June 1960). (3110)

The model TB57 has an electromagnetic control by means of which the extent of the traverse movement of the thread guide is varied in accordance with the knitting width. Other features are noted. Photos.

WARP KNITTING MACHINERY MAINTENANCE. Textile Weekly 60 (1): 1509-1510 (June 17, 1960). (3111)

Pointers on tubular and latch needle maintenance and alignment of sinkers, guides, and needles.

WELD AND SAVE. D. Numan. Textile Inds. 124: 141, 196 (July 1960). (3112)

The welding of the operating lever extension and jack cam shog extension is described. Diagrs.

NEW APPROACH TO FAULTY NEEDLE DETECTION ON WEFT KNITTING MACHINES. V. N. Katrantzos and P. M. Johnson (Leicester Coll. Technol.). Hosiery Trade J. 67: 94-95 (June 1960). (3113)

The device described, irrespective of machine type and speed, will detect a stiff or broken latch or a broken hook and will stop the machine. Preliminary investigations show that only simple modifications in the geometry of the detector head are required in order to fit the device on any V-type flat, single cylinder, or rib circular machine. Since the detector only considers needles which are actually in operation, it is suited for jacquard knitting. Diagrs.

LACING WITH PUNCHED CARD CONTROL. J. B. Lancashire. Hosiery Trade J. 67: 76-77 (July 1960). (3114)

The punched card control for the lacing mechanism of the Bentley-Cotton full-fashioned outerwear unit is described in detail. Photos.

EUROPEAN KNITTING DIARY. R. Innes. Hosiery Trade J. 67: 116-118 (July 1960). (3115)

Among the topics discussed are: a paper on the problems of the flatlock seaming machine and their correction; the Fleissner suction jet dryer and wide fabric dryer for knitted fabrics; MFD 100 power flat bar machine (Claes & Co. KG); and a tubular fabric dryer (Elektro Stahlbau).

GETTING THE BEST OUT OF F. N. F. WARP KNITTING MACHINES. R. Mount. Hosiery Trade J. 67: 113-115 (July 1960). (3116)

This article gives a summary of some common letoff and takeup troubles, their causes, and the means by which they can be prevented. Particular reference is made to the earlier type 28 gage machine fitted with the A703 twin-unit yarn letoff box and also to the Super Rapid machine of today which is equipped with single unit yarn control mechanisms. Diagrs.

MACDET DOUBLE JERSEY MACHINE. G. Lebocey & Cie. Hosiery Trade J. 67: 92-93 (July 1960). (3117)

The Macdet latch needle circular machine offers means for producing effects in stitch and color on the basis of ordinary interlock fabric and its structural variations. Its features are noted. Photos.

HIGH SPEED LACE MACHINE. William Hooton Ltd. Textile Recorder 77: 75 (June 1960). (3118)

The Lacemaster incorporates a new carriage operating mechanism permitting a production speed of 225 rpm.

WILDT MELLOR BROMLEY RTW 8 UNDERWEAR MACHINE. Hosiery Trade J. 67: 87-89 (July 1960). (3119)

The patterning and shogging mechanisms of the RTW 8 circular machine for stitch-shaped underwear are described in detail. Photos.

NEW SYSTEM OF WARP KNITTING PATTERNING. PART 2. D. E. Boyes (Swanwarp Machines Ltd). Hosiery Trade J. 67: 78-79 (July 1960). (3120)

LACE ON MODERN RASCHEL MACHINES. PART 4. THE SECONDARY MOTIONS. B. Wheatley (Nottingham District Tech. Coll.). Man-Made Textiles 37: 85-88 (June 1960). (3121)

The warp letoff and fabric takeup mechanisms of the Karl Mayer machine are described and illustrated. Photos, diagrs.

CIRCULAR KNITTING OF ELASTICIZED SWIM FABRIC ABROAD. R. Innes. Knitted Outerwear Times 29: 25, 53, 56 (July 18, 1960). (3122)

KNITTING OF ELASTICIZED LOOP FABRICS FOR SWIM SUITS. J. B. Lancashire. Knitted Outerwear Times 29: 21, 47, 49 (July 18, 1960). (3123)

Fabrics C4

MOHASCO TUFTED PATTERNING DEVICE. S. Shorrock (Brit. Tufting Machy. Ltd). Skinner's Silk & Rayon Record 34: 653-654 (July 1960). (3124)

The Mohasco system of producing high and low loops consists essentially of passing the yarn from the creel through a series of pattern members mounted on endless chains, through a guide, into a control zone consisting of two guide bars between which rises a jerker bar, and down to the needle of the tufting machine. Details of the pattern feed system and the tufting sequence are given. Diagrs, photos.

MANMADE FIBERS IN CARPETS. PART 2. PILE YARNS ON WOOLEN, FLAX, AND JUTE SYSTEMS. H. Sneyd. Textile Merc. 142: 817-818, 821 (June 17, 1960). (3125)

MANMADE FIBERS IN CARPETS. PART 3. PILE YARNS ON THE COTTON SYSTEM. H. Sneyd (Courtaulds Ltd). Textile Merc. 142: 850-852 (June 24, 1960). (3126)

The cotton system lends itself to the production of carpet yarns because conventional equipment can be used provided suitable adjustments are made for the 2-1/2 in. staple and heavy deniers utilized. A general indication of the necessary equipment is given, and various methods of spinning are outlined.

TUFTED CARPETS: RECENT DEVELOPMENTS AND ADVANCES. A. F. Mactaggart (Rivington Carpets Ltd). Man-Made Textiles 37: 61, 63 (June 1960). (3127)

Among the developments discussed are: viscose/wool blended and bulked continuous filament pile yarns; oil reduction in jute backing; latex, plastic, and paper scrim backings; and patterning equipment advances.

EFFECTS OF FABRIC STRUCTURE ON THE WASH-AND-WEAR PROPERTIES OF VISCOSE LINING FABRICS. A. M. Sookne and J. F. Krasny (Harris Research Labs.); L. Hart and T. R. Scott, Jr. (Am. Enka Corp.). Am. Dyestuff Reptr. 49: 457-462 (June 27, 1960). (3128)

An extensive investigation of the effects of warp and filling texture, weave, and resin concentration is reported. For all of the fabrics, two properties related to appearance (wash-and-wear rating and crease recovery), and two properties related to serviceability (the breaking load and tearing strength) were investigated. The effects of fabric structure on these properties, and some of their interrelationships, are described. Graphs, tables, 7 refs.

PRODUCTION OF SURGICAL COTTON WOOL. PARTS 2 AND 3. W. Rupert. Textil-Praxis 15, No. 3: 236-242; No. 4: 372-378 (1960). In German. Through BCIRA 40: 2058 (1960). (3129)

Part 2. Mixing and opening, carding and packing in the production of surgical cotton wool are discussed in detail, with special reference to modern machinery. Part 3. Sterilization and continuous production of sterilized cotton wool are described, a plan is given for the equipment of a modern cotton wool producing plant, and testing methods for cotton wool are briefly reviewed. For part 1 see abstr. 1938/60.

CORD FATIGUE IN FLEET TESTED TIRES. W. G. Klein, M. M. Platt, and W. J. Hamburger (Fabric Research Labs.). Tappi 43: 657-665 (July 1960). (3130)

This is a progress report on a continuing research which is aimed at delineating the nature of cord fatigue in tires. The current studies performed on the tires from this test indicate that: (1) there is an initial loss of cord strength of about 10 to 15%, occurring within the first 20,000 miles, followed by a long period of very gradually diminishing strength, (2) while there is a trend for a small loss in fiber strength with mileage, it is not correlative with cord strength losses, (3) the strength loss in the few severely weakened cords found was attributable to filament breakage, (4) no unusual strength losses were observed in intact cords from tires classified as fatigue failures. Some observations on the role of adhesion, pertinent to the problem, are presented. Photos, diagrs, graphs, 4 refs.

NYLON FOR INDUSTRIAL USES. J. Buchan (Brit. Nylon Spinners Ltd). Textile Weekly 60 (1): 1573-1574 (June 24, 1960). (3131)

Investigations underway in the Textile Development Dept. on plied conveyor belting, ropes, and fishing twines are briefly described.

BRIGHT PICKS IN RAYON FABRICS. N. Bigler. SVF Fachorgan Textilveredlung 15, No. 3: 212-215 (1960). In German. Through BCIRA 40: 1953 (1960). (3132)

A practical example is given to show how shiny weft threads can be examined microscopically so as to ascertain the factors causing them. Photomicrographs and their examination proved that the defect is not due to the material but to the rayon yarn being stressed during processing (winding or weaving) beyond the limit of elastic elongation which, in relation to the permanent elongation at a certain tension, is considerably lower in regenerated cellulose fibers than in natural and modern chemical fibers.

RESIN TREATED GLASS CLOTHS. J. K. Hyde (Mica & Micanite Supplies Ltd). Fibres and Plastics 21: 169-171 (June 1960). (3133)

PHYSICAL PROPERTIES OF COATED FABRICS. V. K. Hewinson. Textile Merc. 143: 16, 18 (July 1, 1960). (3134)

Results of experiments on the dependence of coating adhesion on interstice size and its consequent influence on tear strength, and the effect of yarn twist and fabric weave on tear strength are reported. Tables.

AVOIDING DEFECTS IN WOVEN FILAMENT FABRICS. A. Chadwick (Brit. Rayon Research Assoc.). Textile Weekly 60 (1): 1517-1518 (June 17, 1960). (3135)

The importance of warp tension control and methods of achieving uniformity are discussed. Graphs.

FASHION FABRIC DESIGNER. W. Hamilton (West Cumberland Silk Mills). J. Textile Inst. 51: P296-P298 (June 1960). (3136)

The basic qualities necessary for a fabric designer and how they may be developed by the study of fashion are discussed.

FINISHING D

DYEING AND FINISHING OF HOSIERY. E. R. Trotman. Dyer 123: 985-989 (June 17, 1960). (3137)

Among the recent developments discussed are: Procinyl and Procion dyes; methods for control of dimensional and preboarding variables; use of restraining agents in the dyebath; continuous dyeing and boarding machines.

FINISHING METHODS FOR MIXTURES OF POLYESTER AND CELLULOSE FIBERS. F. H. Robaard. Meded. Vezelinst. T.N.O. No. 117: 1-49 (1959). In Dutch. Through BCIRA 40: 2098 (1960). (3138)

Review. 76 refs.

MATEX THREE-BOWL PADDER. A. Monforts Maschinenfabrik. Dyer 124: 63, 65 (July 1, 1960). (3139)

The driven center bowl is stationary, but both outer bowls can be swivelled, independently from each other, into any intermediate position through 360 degrees round the center bowl. Photos, diagrs.

PRESSURE OF GUM ROLLERS USED FOR DYEING AND FINISHING. Y. Muira and F. Kitada. J. Soc. Textile Cellulose Inds. Japan 15, No. 10: 824-828 (1959). In Japanese (English summary). Through BCIRA 40: 2102 (1960). (3140)

Contact widths between rollers are measured and used to calculate the pressure and the crown.

Chemical processes D1

COATING MACHINES FOR PVC COATED FABRICS. D. A. Smith (Archibald Edmeston & Sons Ltd). Fibres and Plastics 21: 172-174 (June 1960). (3141)

ADHESION OF HIGH POLYMERS. PART 4. EFFECTS OF MECHANICAL FACTORS ON THE ADHESION OF HIGH POLYMERS. A. P. Pisarenko, A. I. Shapovalova, and S. S. Voyutskii. Kolloid Z. 22, No. 1: 57-62 (1960). In Russian. Through BCIRA 40: 2115 (1960). (3142)

The bonding strength of polymers with low specific adhesion is shown to increase considerably with increasing roughness of the fabric surface, its porosity, and the presence of projecting fibrils. The bonding strength is greatly affected by the cohesive strength of the adhesive, especially in cases where the rough surface (e.g. pile of the fabric) is introduced into the adhesive layer.

EQUIPMENT FOR FABRIC COATING WITH PVC. Fibres and Plastics 21: 176-177 (June 1960). (3143)

PVC PASTES FOR COATED FABRICS. J. R. Clew (Brit. Geon Ltd). Fibres and Plastics 21: 165-168, 171 (June 1960). (3144)

In this article the physical properties of plasticized PVC pastes, fillers, pigments, and suitable plasticizers are described, and a number of different coating methods are reviewed. Diagrs, graph.

APPLICATIONS OF DICHLOROPHEN IN THE TEXTILE INDUSTRY. R. J. Collins and B. E. Purkiss (Brit. Drug Houses Ltd). Textile Mfr. 86: 239-245 (June 1960). (3145)

In this outline of the applications of dichlorophen, methods of estimation, microbiological and insect repellent activities, rotproofing properties, soil burial and weathering tests are discussed. Included in more than 40 military specifications, the methods of application include aqueous, emulsion, and solvent techniques. Tables, 46 refs.

PERMACHEM SYSTEM: TOTAL ENVIRONMENTAL CONTROL. W. W. Burbank (Permachem Corp.). Am. Dyestuff Reptr. 49: P496-P500 (July 11, 1960). (3146)

Results of experiments on treating an entire hospital, e.g. floors, walls, ceilings, furniture, medical equipment, linens, and clothing, with Permachem, a durable bactericide and fungicide, are presented to indicate the feasibility of germicidal control of environment. Photos, diagrs, graphs, table.

SOME PROPERTIES OF SILK FABRICS TREATED WITH ORGANIC SILICONE RESIN. E. Omura and A. Hirata. J. Soc. Textile Cellulose Inds. Japan 16, No. 3: 209-214 (1960). In Japanese (English summary). Through BCIRA 40: 1898 (1960). (3147)

Habutae fabric and silk bolting cloth were treated, and the amount of resin adhering, the water vapor transmission, air permeability, waterproofness, and crease recovery properties were examined.

CREASE RESISTANCE OF RAYON AND COTTON FABRICS. LITERATURE SURVEY. H. Asnes. Medd. TEFO No. 2: 1-26 (1960). In Swedish. Through BCIRA 40: 1897 (1960). (3148)

This review of the literature (from 1955) has 99 references and relates to constructional factors, preparatory treatments, resin finishes, aftertreatments, and measurement of crease resistance.

DETECTION OF ODOR-PRODUCING AMINES IN RESIN FINISHES. R. Aenishänslin. Textil-Rundschau 15, No. 3: 122-125 (1960). In German. Through BCIRA 40: 2118 (1960). (3149)

Identification reactions for ammonia and primary, secondary, and tertiary amines are reviewed to show that, by using very sensitive spot tests on filter paper (ninhydrin reagent for primary, freshly prepared acetaldehyde/sodium nitroprusside for secondary, and phosphorus-molybdenum stannous chloride for tertiary amines) and paper chromatographic separation, it is possible to distinguish between the odor-developing amines on resin finished textiles and arrange them in the corresponding homologous series.

NEW DEVELOPMENTS IN SURFACTANTS. D. Price. Soap Chem. Specialties 36: 47-50, 105, 107 (July 1960). (3150)

A review, with 23 refs.

OPEN SOAPING: HOW MUCH CAN IT BE IMPROVED? J. P. Millburn. Textile Inds. 124: 118-120 (July 1960). (3151)

The reasons for the trend to open-width soaping in print plants and the problems inherent in this process are discussed. Diagrs.

IMPROVED ANTISTATIC FINISH. PART 1. CHEMISTRY OF ASTON 123. W. Ginilewicz (Onyx Chem. Co.). Modern Textiles Mag. 41: 50-54 (July 1960). (3152)

A brief outline is made of the requirements and the nature of an antistatic finishing material of the Aston durable type. The physical and chemical properties are illustrated for Aston 123, a durable antistatic material cross-linked with diepoxides. The mechanism of diepoxide reaction with Aston is briefly discussed. Graphs, 8 refs.

IMPROVED ANTISTATIC FINISH. PART 2. PERFORMANCE OF ASTON 123. M. Schlesinger (Onyx Chem. Co.). Modern Textiles Mag. 41: 54-56 (July 1960). (3153)

In this report on the performance characteristics of Aston 123, the methods of application are outlined and the properties imparted to fabrics treated with this finish are summarized. Tables.

HOSPITAL BLANKETS: OVERCOMING THE PROBLEM OF CROSS-INFECTION. T. A. Pressley. Textile Weekly 60 (1): 1577-1578 (June 24, 1960). (3154)

Laundering trials on wet-chlorinated and Dylan-treated wool blankets with various detergents are reported.

CYANOETHYLATION OF COTTON: REVIEW OF RECENT DEVELOPMENTS. Fibres and Plastics 21: 161-164 (June 1960). (3155)

A review of recent research at the Southern Regional Research Laboratory. 17 refs.

RESINS' STAKE IN EASY-CARE COTTON. Chem. Eng. 67: 74, 76 (July 25, 1960). (3156)

Amounts, types, and special properties of resins used in wash and wear cotton finishing are briefly reviewed.

CHEMICAL MODIFICATION OF COTTON. E. P. Frieser. SVF Fachorgan Textilveredlung 15, No. 3: 185-192 (1960). In German. Through BCIRA 40: 1899 (1960). (3157)

In supplementation of a previous article (abstr. 1494/60), some new results are reported, concerning cyanoethylation; treatment with tris-(aziridinyl)-phosphineoxide (APO); etherification; carboxymethylation; amination; phosphorylation; treatment with ethylamine; aminoethylation, and treatment with β-propiolactone.

DECATIZING OF JERSEY FABRICS IN CIRCULAR FORM. Hosiery Trade J. 67: 120 (June 1960). (3158)

The Grimsley rapid calender shrinking and decatizing machine is capable of giving a decatized finish to knitted fabrics of the single jersey, double jersey, jacquard jersey constructions, etc., both in worsted, manmade, and synthetic fibers and mixtures in circular form. Features of the machine and its processing cycle are described.

IMPROVING THE LIGHTFASTNESS OF NYLON. PART 4. ACETYLATION. PART 5. ALKALI TREATMENT. T. Hashimoto. J. Soc. Textile Cellulose Inds. Japan 15, No. 11: 897-905 (1959). Through BCIRA 40: 1901 (1960). (3159)

Acetylation affects the amino end-groups, but not the amide link, the stress-strain curve, and absorption of hydrogen-ions, water, and disperse dyes. The light resistance is increased by treatment with aqueous caustic soda and temperature enhances this effect.

BLEACHING OF VISCOSE FIBER WITH SODIUM CHLORITE. E. M. Mogilevskii and S. I. Korneva. Khim. Volok. No. 6: 25-26 (1959). In Russian. Through BCIRA 40: 2085 (1960). (3160)

Experimental results show that bleaching of viscose rayon filaments can be carried out by means of brightening agents in a bath containing 1.0-1.5 g/l active chlorine, 1-3 g/l acetic acid, and 1-2 g/l Avirol (brightening agent) at a temperature of 50-55° C for 10-30 sec. The physico-chemical properties and degree of polymerization of the cellulose of the fibers bleached with sodium chlorite do not differ significantly from those of the unbleached product. Hardly any changes occur in the sodium-chlorite bleached viscose rayon on prolonged storage.

ECONOMY OF CONTINUOUS PEROXIDE BLEACH. K. B. Parekh. Indian Textile J. 70: 434-436 (May 1960). (3161)

Continuous peroxide bleaching is compared with kier bleaching with regard to equipment, building, water, steam, chemicals, power consumption, labor and supervision, interest, depreciation, and costs.

WASH-AND-WEAR FABRICS: LAUNDERING EXPERIMENTS WITH WOOL GARMENTS. A. E. Brown and J. F. Krasny. Textile Weekly 60 (1): 1578 (June 24, 1960). (3162)

The paper analyzes the effects of yarn and fabric construction variables by means of specially prepared fabrics. In general, the results corroborated previous findings that compactness correlates well with shrinkage. Exceptions to the general correlation indicate that factors besides compactness must be considered as controlling shrinkage.

HYDROGEN PEROXIDE BLEACHING OF COTTON. A. S. Ramadan. J. Textile Inst. 51: T215-T226 (June 1960). (3163)

A reassessment has been made of the influence of time, temperature, pH, and nature of stabilizing agents in the bleaching of cotton by hydrogen peroxide. It has been found that, by using magnesium complexes as stabilizing agents, a very large increase in efficiency can be obtained, as compared with the normal hydrogen peroxide bleaching recipe. There are also indications that aluminum metal should prove a suitable material for the construction of the peroxide bleaching plant. Graphs, tables, 12 refs.

PREPARATION OF THREE-DIMENSIONAL REPLICAS OF WRINKLED SPECIMENS OF FABRICS; THEIR USE AS STANDARDS FOR ASSESSING WRINKLING OF SHIRTS AND SHIRTING FABRICS AFTER WASHING AND DRYING. Z. M. Sudnik (Brit. Nylon Spinners Ltd). J. Textile Inst. 51: T227-T239 (June 1960). (3164)

A method is described for the assessment of wrinkling of shirts and shirting fabrics after washing and drying. The method employs graded standards made from blocks of polyester resin whose surfaces are replicas of wrinkled fabrics. Photos, tables, 4 refs.

PERMANENT SETTING OF WOOL FABRICS. A. J. Farnworth (C.S.I.R.O.). Textile Mfr. 86: 246-247 (June 1960). (3165)

The steps in the development of washable non-iron wool fabrics using a potassium permanganate shrink-proofing treatment followed by setting with sodium bisulfite are outlined.

STUDIES OF WRINKLE RESISTANCE FINISHES FOR COTTON TEXTILES. PART 1. RELEASE OF FORMALDEHYDE VAPORS ON STORAGE OF WRINKLE-RESISTANT COTTON FABRICS. J. D. Reid, R. L. Arceneaux, R. M. Reinhardt, and J. A. Harris (So. Reg. Research Lab.). Am. Dyestuff Reptr. 49: 490-495 (July 11, 1960). (3166)

The evolution of formaldehyde from fabrics treated for wrinkle resistance with several N-methylol finishing agents has been studied, and the amounts of formaldehyde released on storage have been quantitatively determined. The effects of processing variables, such as time and temperature of cure, amount and type of finishing agent applied, type of catalyst used, and the process wash following curing, have been investigated as related to the amount of formaldehyde produced. Also studied were the principal variables in storage, time and temperature. The process wash after curing was found to have the greatest effect in reducing the amount of formaldehyde evolved from treated fabrics. It was shown experimentally that this was due to removal of residual catalyst by the wash. An accelerated storage test was used in the determination of formaldehyde evolution, and the results were found to have excellent correlation with those of prolonged storage under normal conditions. Graphs, tables, 12 refs.

Dyeing and printing D2

POLAROGRAPHY OF AZO DYES. T. Iijima and M. Sekido (Tokyo Inst. Technol.). (Letter to the editor). J. Soc. Dyers Colourists 76: 354-355 (June 1960). (3167)

LEUCO POTENTIAL OF SULFUR DYESTUFFS. T. Urahata, M. Utsunomiya, and H. Hiyama. J. Soc. Textile Cellulose Inds. Japan 16, No. 3: 220-226 (1960). In Japanese (English summary). Through BCIRA 40: 2107 (1960). (3168)

The leuco potential of 8 sulfur dyes and the reduction potential of reducing agents were examined. Under dyeing conditions, the reduction power decreases in the order: thiourea dioxide > sodium hydrosulfite > alkali metal sulfide. Control of the dyebath is possible (pH and temperature) as with vat dyes.

DYEING BEHAVIOR OF DIACT COLOR (C TYPE) REACTIVE DYES FOR CELLULOSE FIBERS. T. Urahata, O. Manabe, and H. Hiyama. J. Soc. Textile Cellulose Inds. Japan 16, No. 3: 227-234 (1960). In Japanese (English summary). Through BCIRA 40: 2091 (1960). (3169)

The dyes have CON_3 groups. Their rate of batchwise dyeing and the fastness of dyeings are similar to the Procions (cold type) but the color of dyeings is changed appreciably by severe washing with sodium carbonate.

NEW INTERMEDIATES AND DYES. PART 8. 1,4-DISUBSTITUTED DERIVATIVES OF 2-BUTYL-ANTHRAQUINONE: DYES FOR CELLULOSE ACETATE, RAYON, NYLON, AND TERYLENE. A. T. Peters and A. T. Peters, Jr. J. Chem. Soc.: 1125-1130 (Mar. 1960). Through BCIRA 40: 2088 (1960). (3170)

NEW DEVELOPMENTS IN REACTIVE DYES. PART 1. A. J. Hall. Textile Recorder 78: 58-60 (July 1960). (3171)

The chemical nature, dyeing properties, and more interesting and technically useful features of the Procion, Cibacron, and Remazol dyes are described.

DYEING PROPERTIES OF AZO ACID DYES. PART 4. T. Iijima and M. Sekido. J. Soc. Textile Cellulose Inds. Japan 15, No. 11: 911-916 (1959). In Japanese (English summary). Through BCIRA 40: 1888 (1960). (3172)

The adsorption of azo acid dyes by nylon-6 in neutral and alkaline solutions was examined. The equilibrium adsorption of pH values greater than the isoelectric point is relatively high, but is linearly dependent on the amino end-group content of the dye even at pH 10.

STUDIES ON THE DYEABILITY OF VINYLON. PART 1. COLOR-DEPTH AND COLOR-SHADE WITH A DIRECT DYE. PART 2. WITH A DISPERSE DYE. K. Tanabe and A. Nasuno. J. Soc. Textile Cellulose Inds. Japan 16, No. 3: 235-245 (1960). In Japanese (English summary). Through BCIRA 40: 1889 (1960). (3173)

The dyeing of wet- and dry-spun, heat-treated, and formalized fibers with Congo Red and Diacelliton Fast Brilliant Blue BF was studied and compared with that of viscose rayon, cotton, and cellulose acetate. The dyeing properties of wet-spun Vinylon are inferior to those of the dry-spun.

DEVELOPMENT OF THE STANDFAST PATENT CONTINUOUS MOLTEN METAL VAT DYEING PROCESSES. A. Ogden (Standfast Dyers & Printers Ltd). Am. Dyestuff Reptr. 49: P466-P471 (June 27, 1960). (3174)

The application of the process to the leuco dyeing of fabrics and yarns and its advantages are discussed. Photos, diagrs, 2 refs.

DYEING OF VINYLON. PART 6 & 7. CONDENSATION-COMBINATION DYES. PART 8. CONDENSATION DYEINGS WITH ACTIVE HALOGEN COMPOUNDS. K. Yamada, C. Shinomiya, and M. Takase. J. Soc. Textile Cellulose Inds. Japan 15, No. 11: 917-930 (1959). Through BCIRA 40: 1890 (1960). (3175)

Formation of pigments on the fiber by combination of compounds of low molecular weight (p-benzoquinone, p-nitrosodimethylaniline, 4,4'-bisdimethylbenzhydrol, amines and phenols) was examined; with the pigment produced in situ the fiber can be dyed quickly and deeply. Halogen derivatives containing solubilizing groups give good results on nylon, wool, and Vinylon, but not on cotton.

DYEING OF VINAL STAPLE. W. H. Hindle (Walter H. Hindle Inc.). Am. Dyestuff Reptr. 49: P463-P465 (June 27, 1960). (3176)

The dyeability of vinal fibers with direct, sulfur, vat, metal complex, acid, disperse, cationic, and naphthol dyes is discussed.

DYEING OF WOOL BY SOLVENT-ASSISTED PROCESSES. W. Beal, K. Dickinson, and E. Bellhouse (Geigy Co. Ltd). J. Soc. Dyers Colourists 76: 333-341 (June 1960). (3177)

The influence of solvents, in particular benzyl alcohol, on the normal processes of wool dyeing and printing is reviewed in detail. The significance of the effect and the methods of utilizing it are discussed. Consideration is given to the practical and commercial aspects of solvent-assisted techniques for dyeing and printing wool. Diagrs, graphs, tables, 14 refs.

CHEMICAL AND THERMAL BEHAVIOR AND THE DYEING OF POLYESTER FIBERS. H. Petzold and H. Stökigt. Deut. Textiltech. 10, No. 3: 148-153 (1960). In German. Through BCIRA 40: 2095 (1960). (3178)

The behavior of polyester fibers (especially Lanon) to heat treatments and to chemicals (detergents, organic solvents, acids, alkalis, oxidizing and reducing agents, carriers) is reviewed, and dyeing of polyester fibers with disperse dyes in the presence of carriers or at high temperatures is described. Practical findings during dyeing of pure Lanon or its blends with wool or viscose rayon staple are reported.

INTRODUCTION OF CHELATE BONDS INTO FIBERS. PART 10. EFFECTS OF INTRODUCING CR ION INTO THE POLYESTER TETORON ON STRENGTH AND DYEING PROPERTIES. N. Hojo and N. Minemura. J. Soc. Textile Cellulose Inds. Japan 16, No. 3: 177-178 (1960). In Japanese (English summary). Through BCIRA 40: 2097 (1960). (3179)

Improvement in dyeing, e.g. with Sunchromine Pure Blue B extra, can be achieved without great loss of strength (e.g. -3%).

NEW METHODS OF COLORING CARPETS. PART 2. R. C. Cheetham, G. W. Lewis, and F. Waller (Courtaulds Ltd). Man-Made Textiles 37: 78-79 (June 1960). (3180)

Developments in pad-steaming, dyeing in trays, color application by foam plastic covered rollers, and the Mohasco method of patterning tufted carpet are briefly discussed. Photo, diagrs, 5 refs.

PHYSICO-CHEMICAL STUDY OF THE EFFECT OF CARRIERS IN POLYESTER FIBER DYEING. P. Rochas. Teintex 24, No. 12: 825-851 (1959). In French. Through BCIRA 40: 2094 (1960). (3181)

The mechanism of carriers which, when added to the plastosoluble-dye solution, facilitate dyeing of polyesters under economical industrial conditions, is discussed, with special reference to the retention of carriers and the swelling in water of polyester fibers in the presence of carriers but in the absence of dyes, as well as the effect of these phenomena on the dyeing rate.

PRIMASOL FP, NEW DYE ASSISTANT IN MACHINE DYEING COTTON WITH INDANTHRENE DYES. E. Wilhelm. Textil-Praxis 15, No. 3: 302-304 (1960). In German. Through BCIRA 40: 2086 (1960). (3182)

Primasol FP is claimed to have an excellent wetting power and, therefore, to be especially useful in dyeing raw cotton; to retain the soft handle of the material; to have a sufficiently high emulsifying action for the waxes and fats present in raw cotton and sufficient leveling power for the development of dyeings; to produce brighter and deeper shades; to be insensitive to alkali concentrations used in vat dyeing; to have a low foaming power; not to lead to 100% exhaustion of the pigment bath and, therefore, producing favorable conditions for obtaining level dyeings; to eliminate the necessity of adding electrolytes and acids; to produce favorable conditions for bringing the dyeings up to shade. The dyeing method is described.

LEVEL WOOL DYEING. PART 2. C. H. A. Schmitt (Sandoz Inc.). Modern Textiles Mag. 41: 32-34, 66 (July 1960). (3183)

The importance of proper dye dissolving, sequestering agents for iron removal, dye choice, temperature control, and proper moisture extraction in achieving level dyeing is stressed.

NEW ONE-BATH METHOD FOR CONTINUOUS OR PAD-ROLL VAT DYEING. F. L. J. van Lamoen and H. Borsten (Vezelinstituut T. N. O., Holland). J. Soc. Dyers Colourists 76: 349-354 (June 1960). (3184)

A description is given of a new 1-bath method for continuous vat dyeing, which can be used in both pad-steam installations and pad-roll machines. Although at present the full details concerning the best procedure are not available, it is expected that the method developed for the continuous vat dyeing of relatively short lengths of cloth will prove most suitable for pad-roll machines. Graphs, 10 refs.

IRONING FASTNESS OF NAPHTHOL AS DYEINGS ON COTTON. W. Kirst. Textil-Praxis 15, No. 3: 290-301 (1960). In German. Through BCIRA 40: 2105 (1960). (3185)

The sublimation behavior of Naphthol AS dyeings (using combinations of fast dye salts and bases with Naphthols) was examined in the temperature range of 190-280° C. It was found that about 41.5% of the dyeings tested recover their shade during storage at a temperature of 190° C, but a considerably smaller quantity withstands the ironing test without damage at increasing temperature. It is also shown that pretreatment of the cotton and the intensity of the aftertreatment of the dyeings have a certain effect on the ironing fastness, and that this effect can be influenced also by the relative air humidity during ironing. The results are tabulated.

STUDY OF THE PROCESS OF DYEING POLYACRYLONITRILE FIBER. A. A. Geller and A. B. Pakshver. Khim. Volok. No. 6: 15-17 (1959). In Russian. Through BCIRA 40: 2099 (1960). (3186)

It is shown that, during formation, drawing, fixing, and drying of the fiber, considerable condensation of the fiber structure, expressed in rapidly decreasing diffusion of the dye into the fiber, takes place. Simultaneously with the retardation of the dye absorption rate during plastic elongation of the polyacrylonitrile fiber, the equilibrium sorption of the dye increases. It is assumed that, during stretching, fixing, and drying of the fiber, the dimensions of the internal cavities and channels decrease, new cavities are formed, and the internal active surface of the fiber increases.

RELATION BETWEEN PHYSICAL STRUCTURE AND DYEABILITY OF NYLON 6 FIBERS. PART 1. EFFECTS OF TENSION AND HEAT SETTING ON DYEABILITY OF NYLON 6 FIBERS. M. Tsurata, A. Koshimo, and T. Machara. J. Soc. Textile Cellulose Inds. Japan 16, No. 3: 215-219 (1960). In Japanese (English summary). Through BCIRA 40: 2093 (1960). (3187)

It is thought that uneven tensions in processes preparatory to weaving and knitting may, after heat setting, lead to irregular dyeing. Nylon 6 filaments, either stress-relaxed under various tensions or heat treated after stress-relaxation, were prepared and studied. Tension effects on the dyeability are considerable in heat set fibers, particularly tensions less than 0.5 g/den., and the greater the mol. wt. of the dye used the greater the effect.

NEW THICKENERS IN THE TEXTILE INDUSTRY. W. Porges. Textil-Rundschau 15, No. 3: 126-130 (1960). In German. Through BCIRA 40: 2108 (1960). (3188)

Printing paste thickeners based on cellulose esters, resin emulsions, etherified starches, sodium alginates, and etherified Carubin (etherified locust bean flour) are reviewed.

CARUBIN AND GUARAN: BINDING AND THICKENING AGENTS FROM PLANTS. A. Lukaszczyk. Textil-Rundschau 15, No. 3: 130-134 (1960). In German. Through BCIRA 40: 2109 (1960). (3189)

The polysaccharides Carubin and Guaran (locust bean gum and guar gum) are characterized as regards their chemical constitution and the properties of their solutions. They can be combined together by bifunctional reagents (e.g. borax) to give a water-insoluble swelling product. A printing paste thickener can be prepared from Carubin by etherification with halogenated fatty acid in the presence of alkals. Uses of Carubin and Guaran and their derivatives (as well as of galactomannans in general) are enumerated.

ROLLER PRINTING. PART 1. HOW TO SELECT A DESIGN AND ENGRAVE IT. L. H. Ferguson (Wade Mfg. Co.). Textile World 110: 78-82 (July 1960). (3190)

MODERN PROCEDURES FOR ROLLER ENGRAVING IN INTAGLIO PRINTING OF TEXTILES. O. Zeman. Z. ges. Textil-Ind. 62, No. 8: 297-299 (1960). In German. Through BCIRA 40: 2110 (1960). (3191)

The development and technique of the autotype intaglio printing method and preparation of the printing rollers are described, with reference to the respective machinery.

ENGLISH CONTRIBUTION TO THE EARLY HISTORY OF INDIGO PRINTING. P. C. Floud (Victoria & Albert Museum). J. Soc. Dyers Colourists 76: 344-349 (June 1960). (3192)

An examination has been made of the early uses of the tepid indigo fermentation vat and its consequent use with resist techniques, culminating in the use of metal blocks for the printing of the wax resist. A description is given of the important English contributions to the early history of indigo printing, firstly by the use of "penciling," and secondly by the "china-blue" technique of direct printing with indigo. Photos.

PRINTING OF TRIACETATE RAYON. Imp. Chem. Inds. Ltd. Textile Weekly 60 (2): 89-90 (July 8, 1960). (3193)

Recommended printing recipes and procedures with Procinyl, disperse, and vat dyes are summarized. Table.

ALJABA ROTARY SCREEN PRINTING MACHINE. Man-Made Textiles 37: 64 (June 1960). (3194)

The Aljaba consists of a central rubber covered pressure bowl around which is placed phosphor bronze cylindrical screens. Its operation and productivity are described, and its potential use for candlewick material is noted.

DIRECT DYEING OF CELLULOSE. PART 8. RELATION BETWEEN THE DYEING PROPERTIES AND THE CONJUGATED SYSTEM OF DOUBLE BONDS. K. Nishida. J. Soc. Textile Cellulose Inds. Japan 15, No. 10: 837-841 (1959). In Japanese (English summary). Through BCIRA 40: 2092 (1960). (3195)

Absorption isotherms of four dyes (two containing conjugated chains) were determined. The mean standard affinities are not in line with Vickerstaff's views (Physical Chemistry of Dyeing, 1954, p. 183).

Mechanical processes D3

SELECTO-FINISHER. Meccanica del Nord. Hosiery Trade J. 67: 85-86 (July 1960). (3196)

Features of this fully automatic seamless hose inspecting, trimming, turning, transporting, and quality selection machine are described. Photos.

WIDE SCHREINER CALENDER. Sir James Farmer Norton & Co. Ltd. Dyer 124: 61, 63 (July 1, 1960). (3197)

GAS-FIRED RIBBON FLAME FABRIC SINGEING MACHINE. James Bailey (Engineers) Ltd. Textile Recorder 78: 80 (July 1960). (3198)

Intended primarily for use with staple synthetic fiber fabrics, mixtures, and mohair, the machine described incorporates safety devices to protect the fabric in the event of a check in the feed, an effective gas/air mixture control, and a mechanical variable speed drive. Photos.

Drying, setting, conditioning D4

CYLINDER DRYING MACHINES FOR WIDE FABRICS. Fleissner & Sohn. Textile Recorder 77: 79 (June 1960). (3199)

Two systems are described, both employing large 74 in. diameter perforated drums; they dry by hot air but have alternative fan arrangements. Diagrs.

WOOL DRYING. PART 1. H. Needham and W. Parkin. Wool Rev. 34: 32-33 (July 1960). (3200)

The principles of loose-wool drying are discussed. Types of counterflow machinery are described. Diagrs.

STATIC PRESSING OF WET SHEETS AND FELTS. R. E. White and F. W. Berdux. Tappi 43: 580-586 (June 1960). (3201)

Pressure-temperature-moisture equilibrium data obtained by static pressing of wet sheets and felts are presented. Three types of felts and three different papers, pressed individually and in various combinations, were studied. The migration of water from felt to paper upon the release of pressure is clearly indicated. Tables, 7 refs.

RADIANT HEAT IN COATED FABRIC PRODUCTION. E. S. Morley (Industrial Infra-Red Ltd). Fibres and Plastics 21: 175 (June 1960). (3202)

EFFECT OF HEAT TREATMENT ON γ-RAY IRRADIATED POLYVINYL CHLORIDE FIBERS. PART 2. T. Aramaki, H. Hayanami, and M. Takayanagi. J. Soc. Textile Cellulose Inds. Japan 16, No. 3: 203-208 (1960). In Japanese (English summary). Through BCIRA 40: 1902 (1960). (3203)

The crystallinity, degree of orientation, and strength decreased, but the heat resistance was greatly improved (e.g. thermal shrinkage values of less than 15% even at 200° C). The mechanism of cross-linking was studied.

TESTING AND MEASUREMENT E

HYSTERESIS AND RELATED TEXTILE PROPERTIES. PART 2. COUNTING TUBE SYSTEM RESILIENCE METER. K. Shirakashi, K. Ishikawa, W. Ishibashi, and T. Shibusawa. J. Soc. Textile Cellulose Inds. Japan 15, No. 11: 863-867 (1959). Through BCIRA 40: 1923 (1960). (3204)

The apparatus is described and electrical circuit diagrams are shown. Its use need not be confined to small deformations, and hysteresis, resilience, and toughness after large deformations resulting from repeated elongations can be measured.

Fibers E1

MICROTECHNICAL METHOD IN THE TEXTILE LABORATORY. S. M. Charlett. Can. Textile J. 77: 46-48 (July 8, 1960). (3205)

Techniques for the separation of fibers from a mixture, as well as for microscopical examination of adulteration or damage are described. 11 refs.

INDICES FOR THE EVALUATION OF FIBER QUALITY. E. Szucht. Przeglad Wlok. 13, No. 11-12: 564-569 (1959). In Polish. Through BCIRA 40: 1933 (1960). (3206)

The problem of quality evaluation of fibers (especially manmade) is discussed on the basis of their behavior during processing and wear, special reference being made to the content of impurities; physical, dyeing, hygienic, and hygroscopic properties; dimensional stability; resistance to physical, chemical, and biological stresses; strength properties; molecular structure; morphological properties; thermal, electrical, and acoustical properties.

ELASTIC PROPERTIES OF STAPLE FIBERS. E. A. Nemchenko. Khim. Volok. No. 6: 47-49 (1959). In Russian. Through BCIRA 40: 2137 (1960). (3207)

The method described makes it possible to determine the main properties of various staple fibers (polyamide, glass, wool, Terylene, cotton, etc.), e.g. elasticity, specific volume, and specific gravity, air content in a given volume of the fiber mass, and compressibility of the latter. These values determine the technological properties of the fibers and can be used as a criterion in maintaining and selecting optimum conditions for mechanical and chemical treatments of the fibers during their production and in producing suitable fiber blends.

LOSS MODULUS OF SINGLE FIBERS. V. Dischka. Faserforsch. u. Textiltech. 11, No. 2: 73-84 (1960). In German. Through BCIRA 40: 2136 (1960). (3208)

Having discussed the theoretical principles, the author describes a device for determining the elasticity and loss moduli of single fibers by the resonance-frequency method. The device (developed by the Hungarian Research Inst.), based on measuring the electromagnetic vibration, gives as measuring values the adjusted frequency and the stress and elongation amplitudes, from which it is possible to determine the elasticity modulus, the loss modulus, the tangent of the loss angle, the coefficient of internal friction, and the total and dissipated deformation energy. Factors affecting these values are discussed and presented graphically for various natural and synthetic fibers.

PART 1. REVIEW OF THE PRESENT CONSTRUCTIONS OF MICRONAIRE DEVICES. PART 2. REVIEW OF MODERN COTTON TESTING METHODS. F. Hadwich. Textil-Praxis 15, No. 3: 221-225; No. 4: 339-341 (1960). In German. Through BCIRA 40: 2139 (1960). (3209)

Part 1. Known types of micronaire devices (standard micronaire 80400, semiautomatic micronaire 80500, Fibronaire, Fasonaire, Arealometer, Speedar, Port-Ar, WIRA fineness meter, Hungarian fiber-fineness tester, and ACCO Autonaire) are reviewed. Part 2. The state of modern cotton testing (at the time of the Cotton Testing Colloquium in Bremen, 1960) is reviewed, with special reference to classification, fiber length measurement, color determination, fiber-fineness testing, maturity determination, nep counting, and moisture measurement. Other papers read at the Colloquium are also reproduced: The systematic classification of Soviet cotton; New Pressley test procedure with continued combing-out of tufts, by F. Hadwich, p. 345-348; The relationship between cotton properties and yarn quality, by G. W. Pfeiffenberger, p. 348-356; Some of the connections between micronaire values and fiber structure data in the testing of cotton, by J. Juilfs, p. 356-359; and Comparative measurements between micronaire testers of different types of construction, by F. Hadwich, p. 359-361.

EVALUATION OF COTTON QUALITY. T. Fransen. Ann. Sci. Textiles Belges No. 4: 53-63 (Dec. 1959). In French. Through BCIRA 40: 1928 (1960). (3210)

The terms equality value and quality index are explained. These values are used in the laboratory with a view to evaluating the quality of raw cotton. The equality value shows whether the cotton examined behaves normally during spinning, taking into account its fiber properties. The quality index expresses the total and absolute value of the cotton, the parameters incorporated in this value comprising three groups (properties characterizing the commercial quality of cotton, fiber properties determining the technological quality of cotton, and characteristics determining the behavior of cotton during spinning and the technological quality of the yarn).

QUANTITATIVE DETERMINATION OF COTTONIZED BAST FIBER IN THE PRESENCE OF VISCOSE STAPLE FIBER. E. Frieser. Textil-Praxis 15, No. 3: 284-290 (1960). In German. Through BCIRA 40: 2150 (1960). (3211)

Five physical and nine chemical methods for separating cottonized bast fiber/viscose staple fiber mixtures are examined, and the results are summarized in a table to show that the modified formic acid/calcium chloride method developed by the author gives the most accurate results. For rapid plant analysis, the sodium hydroxide methods (according to Schwertassek and Koch, respectively) and the sodium zincate method by Heim (Summary, 1950, p. 238) can also be used. The physical methods give average values, but are not as accurate as the modified formic acid/calcium chloride method.

APPRAISAL OF THE DIGITAL FIBROGRAPH AND FIBROSAMPLER FROM THE MILL VIEWPOINT. L. T. Hall (Kendall Co.). Textile Inds. 124: 107-113 (July 1960). (3212)

The main objective in working with the Digital Fibrograph-Fibrosampler combination was to appraise and compare the Digital-Fibrosampler results with those obtained with the Servo hand-combing and the Suter-Webb Sorter array techniques for precision, accuracy, and reproducibility. This appraisal leads to the conclusion that the Digital Fibrograph-Fibrosampler combination provides a practical, useful, and timely laboratory test. Graphs, 3 refs.

STRENGTH OF FIBER BUNDLES AND TOPS. D. A. Ross (New Zealand Wool Ind. Research Assoc.). J. Textile Inst. 51: T240-T259 (June 1960). (3213)

Results are given of strength tests on fiber bundles and wool tops with greater-than-zero jaw-separation distances. Strength tests on large bundles of manmade fibers are highly repeatable, while with constant jaw-separation the strength of comb-sorter wool fiber bundles from a top decreases per unit area of cross-section as fiber length (and fiber diameter) decrease. For both manmade fiber and wool tops, there is a linear relationship between log breaking load in lb/g, based on the weight of the fibers cut from between the jaws after breaking, and the distance apart of the jaws. From this relationship, a measure of the intrinsic strength of the fibers and the mean fiber length of wool tops can be obtained. Factors affecting the breaking strength of fiber bundles and tops were investigated, and the results are discussed with relation to several aspects of textile testing. The equation used for correcting single-fiber breaking loads to a constant breaking time is applicable to fiber bundles. Graph, tables, 11 refs.

SPAN LENGTH AS A FIBER LENGTH CRITERION. K. L. Hertel and C. J. Craven (Univ. Tenn.). Textile Inds. 124: 103-107 (July 1960). (3214)

Span length is a distance the fibers will span or bridge. In the first case it is that distance which only a small fraction will span to prevent breakage, whereas in the second case it is that length which about two-thirds of the fibers will span and will contribute their ultimate or breaking strength. The two span lengths recommended are the 2.5% span length and the 67% span length. 2 refs.

EVALUATION OF THE DEGREE OF MICROBIOLOGICAL ATTACK ON COTTON AND MEASUREMENT OF THE INTENSITY OF DEGRADATION. G. Raes, A. Nicolaus, and T. Fransen. Ann. Sci. Textiles Belges No. 4: 32-52 (Dec. 1959). In French. Through BCIRA 40: 1932 (1960). (3215)

Methods permitting detection of microbiological attack are reviewed, with special reference to the method for evaluating the degree of degradation, based on the ACV test (alkali centrifuge value). Practical examples are given to illustrate different aspects of degradation, e.g. bacterial attack, artificially degraded cotton (by an incubation test), and cotton showing fluorescent bright greenish-yellow spots. 33 refs.

Yarns E2

QUALITESTER YARN REGULARITY TESTER. Qualitex Electronische Apparatenfabriek NV. Hosiery Trade J. 67: 106 (June 1960). (3216)

This electronic yarn tester is a control instrument which gives information regarding the number and kinds of spinning faults in a yarn. It also indicates details regarding the regularity of the yarn. Long lengths of yarn can be tested in a short time. Photos.

METHOD OF DETERMINING THE RESISTANCE OF MANMADE FIBER YARNS TO REPEATED BENDING. N. V. Demina. Khim. Volok. No. 6: 43-47 (1959). In Russian. Through BCIRA 40: 2141 (1960). (3217)

Having pointed out the disadvantages of the Schopper and Tachikawa testers, the author describes the method and apparatus (DP-15) used in the laboratory of the All Union Scientific Research Inst. for Textile Testing, USSR. This apparatus can be used to determine, for fibers of different chemical nature, the dependence of their resistance to repeated bending upon the tension, the total and elementary metric counts, and the number of filaments in the yarn. The experimental data, obtained by using various methods for testing the yarns, refer to Kapron, Enant, Anid, cellulose acetate, and viscose rayon yarn.

CONSTANT TENSION CONTINUOUS WINDING TEST IN YARN TESTING WITH PARTICULAR REFERENCE TO JUTE YARNS. B. L. Banerjee (Indian Jute Mills Assoc.). Indian Textile J. 70: 386-389, 391 (Apr. 1960). (3218)

INSTRUMENTS FOR MEASURING THE TEMPERATURE OF A RUNNING THREAD-LINE, AND OF A JET OF VISCOUS LIQUID. M. F. Culpin and K. A. Martin (Brit. Nylon Spinners Ltd). J. Sci. Instr. 37: 250-251 (July 1960). (3219)

A "laboratory and workshop note." Diagrs.

NEW DEVICE USING THE RESONANCE FREQUENCY METHOD FOR DETERMINATION OF THE BENDING YOUNG'S MODULUS OF A SINGLE FILAMENT OF COMMERCIAL VISCOSE RAYON. S. Okajima and S. Suzuki. J. Soc. Textile Cellulose Inds. Japan 15, No. 10: 809-813 (1959). In Japanese (English summary). Through BCIRA 40: 2142 (1960). (3220)

To overcome the difficulties associated with irregular cross-section, the filament is vibrated in four different directions perpendicular to each other and the modulus is calculated from the mean of the maximum and minimum resonance frequencies.

MEASUREMENTS OF THE FLEXURAL RIGIDITY OF FIBERS AND YARNS. Y. Go, A. Shinohara, and Z. Kodaira. J. Soc. Textile Cellulose Inds. Japan 16, No. 3: 190-196 (1960). In Japanese (English summary). Through BCIRA 40: 2134 (1960). (3221)

Two methods, a long column method for high denier (above 20 den.) materials, and a loop method for finer filaments and twisted yarns, have been devised, and are described and discussed.

TEXTILES: COUNT DETERMINATION OF SINGLE AND PLIED YARNS. Swiss Standards Assoc. Textil-Rundschau 15, No. 3: 135-140 (1960). In German. Through BCIRA 40: 2152 (1960). (3222)

The specification SNV 97432 is the literal translation of the ISO recommendation for the standard method of determining the count of yarns on yarn packages (value per unit length-lea method). It describes the applicability, terminology, principles, testing devices, standard temperature and humidity conditions, sampling, preparation of the samples, testing method, calculations, and items to be included in the test report. Tables listing the commercial additions and tolerances (humidity) for the individual fibers and yarn-count conversion factors (from tex units to other systems in use) are given in the addenda.

INTRODUCTION OF THE TEX SYSTEM FOR DESIGNATION OF YARN NUMBER. ASTM Bull. No. 247: 48-51 (July 1960). (3223)

The scope and benefits of the tex system, as well as the three stages of action in the plan for its orderly introduction to the textile industry, are discussed. Conversion tables. 17 refs.

Fabrics E3

PROBLEMS OF CLOTH INSPECTION. PART 2. A. Cross and G. Newbery. Textile Recorder 77: 55-57 (June 1960). (3224)

The extent to which differences can exist between the standards of different inspectors in tagging and cutting, and commercial and organizational factors in inspection are considered. Photos, 2 refs.

PROBLEMS OF CLOTH INSPECTION. PART 3. A. Cross and G. Newbery. Textile Recorder 78: 56-57 (July 1960). (3225)

The functions of and differences between grading inspection and control inspection are considered. Photos, 1 ref.

FATIGUE TESTING OF RAYON FABRICS WITH VARIOUS WEAVES AND WEFT DENSITIES. W. Wegener and H. E. Kellermann. Z. ges. Textil-Ind. 62, No. 7: 257-260 (1960). In German. Through BCIRA 40: 2158 (1960). (3226)

Results of dynamic fatigue tests on cuprammonium rayon fabrics are reported, which were carried out by means of the new Wegener tester PD 12 based on the principle of periodically recurring maximum and minimum stress limits (abstr. 1591/60). The tests were carried out to study the effects of fabric structure and stress in warp and weft direction on the elongation behavior of the fabric during dynamic testing.

FATIGUE PHENOMENA IN TEXTILES. H. Böhringer. Faserforsch. u. Textiltech. 11, No. 2: 66-73 (1960). In German. Through BCIRA 40: 2157 (1960). (3227)

Constant and alternating periodical and aperiodical mechanical factors causing fatigue phenomena in textile materials and based on various types of tensions occurring during processing are discussed, and the effect of tension differences on the fatigue and, ultimately, on the wear value, is illustrated by wear experiment examples. Testing devices producing fatigue are briefly reviewed, and a method is described by means of which the fatigue of fibers can be determined quantitatively.

Other E4

CREASE RESIST PROCESS: IDENTIFICATION OF AMINO-ALDEHYDES. PART 2. J. T. Marsh. Textile Recorder 77: 58-59 (June 1960). (3228)

Tests considered in this article include chromatography and quantitative estimations for resin and formaldehyde content.

CREASE RESIST PROCESS: IDENTIFICATION OF AMINO-ALDEHYDES. PART 3. J. T. Marsh. Textile Recorder 78: 63-64 (July 1960). (3229)

Quantitative tests for various formaldehydes, methylene, urea, and melamine are described.

MILL MANAGEMENT F

FACTORS CONSIDERED IN PLACEMENT OF TECHNICAL PEOPLE. A. F. Hartford (E. I. du Pont de Nemours & Co.). Am. Dyestuff Reptr. 49: P501-P503 (July 11, 1960). (3230)

The six major factors considered by the Du Pont company in the placement of technically trained personnel (motivation, practical intelligence, relationships with others, maturity, ability to communicate, and leadership) are discussed.

Industrial engineering F1

MODERN PLANT ACCOUNTING AND CONTROL BY STATISTICS. R. Tobel. Z. ges. Textil-Ind. 62, No. 7: 224-230 (1960). In German. Through BCIRA 40: 2188 (1960). (3231)

The necessity of introducing statistical quality control in testing plant products and eliminating sources of faults is discussed.

QUALITY CONTROL IN A TEXTILE MILL. I. Afzal (Pakistan Inst. Cotton Research & Technol.). Pakistan Cottons 4: 244-247 (Apr. 1960). (3232)

General aspects of control in a textile mill, from picking through spinning.

STATISTICAL QUALITY CONTROL IN OPERATION: MOHINI MILLS LTD. ISQC Bull. 5: 25-32 (Oct. 1957). (3233)

An application of control charts and process-to-process variations analysis, including waste control. Graphs, tables.

APPLICATION OF STATISTICAL QUALITY CONTROL TECHNIQUES IN THE CARDING SECTION OF A SPINNING MILL. M. K. Dey (Mohini Mills Ltd). ISQC Bull. 5: 43-50 (Feb. 1958). (3234)

A comparison of actual versus mathematically expected variation in carding.

SPINNING MILL QUALITY CONTROL. T. W. Walker. Textile Weekly 60 (2): 79-80, 83 (July 8, 1960). (3235)

The application of sequential analysis to lea strength tests being used in a mill as a guide to the spinning quality of a cotton is explained. Graph, table, 2 refs.

QUALITY CONTROL IN COTTON SPINNING: ITS PRINCIPLES AND ORGANIZATION. R. G. Newbery. J. Textile Inst. 51: P287-P295 (June 1960). (3236)

This paper outlines the principles and aims which the author believes should underlie an effective system of quality control. Some of the present methods are considered in the light of these principles, and an attempt is made to discover the possible causes of weakness. The implications of the suggested approach from an organizational standpoint are given. 1 ref.

CONTROL OF QUALITY. W. Atherton. Textile Mfr. 86: 226-228 (June 1960). (3237)

The main functions of a quality control system and methods for their implementation are discussed. The importance of a planned maintenance system in achieving an efficient quality control system is stressed.

PRODUCTION PLANNING AND CONTROL. L. Bellwood. Wool Rev. 34: 35, 37 (July 1960). (3238)

Part 6. Procedure on receipt of order. Production control.

MACHINE INTERFERENCE. A. Chatlain and J. Strijckman. Ann. Sci. Textiles Belges No. 4: 64-91 (Dec. 1959). In French. Through BCIRA 40: 2011 (1960). (3239)

A method is described for calculating the loss of production due to machine breakdowns in cases where several machines, attended by one operator, stop accidentally at the same time. The first part deals with the case where an operator has only to restart the respective machine, the second with a more general case where he must also carry out other additional work of variable importance and, in the third, two examples are given for the use of this method in winding and weaving.

TIME STUDY RESULTS AS BASIS FOR THE CALCULATION OF COSTS IN PLANTS OF THE TEXTILE INDUSTRY. R. Klinke. Z. ges. Textil-Ind. 62, No. 7: 230-233 (1960). In German. Through BCIRA 40: 2189 (1960). (3240)

The method described is based on calculating the costs of various products on the basis of time study results in dependence of the output.

DETERGENTS IN WATER AND SEWAGE. J. D. Justice (Lever Bros. Co.). Soap Chem. Specialties 36: 55-57, 174-175 (July 1960). (3241)

REVIEW OF THE LITERATURE OF 1959 ON WASTE-WATER AND WATER POLLUTION CONTROL. H. Heukelekian and others. J. Water Pollution Control Fed. 32: 443-481 (May 1960); 545-593 (June 1960); 681-720 (July 1960). (3242)

Part 1. Analytical methods (35 refs) and sewage (146 refs). Part 2. Industrial wastes (174 refs). (Textile and wool scouring wastes, p. 567-568.) Radioactive wastes (68 refs). Part 3. Water pollution (239 refs).

WATER CONSERVATION BY EXTERNAL RE-USE. L. L. Klinger (Whippany Paper Board Co.). Tappi 43: 669-672 (July 1960). (3243)

This paper reviews practicable methods of handling discharge process waters for their re-use by the paper and paperboard industry. 5 refs.

REDUCE NOISE AND INCREASE EFFICIENCY IN TEXTILE MANUFACTURING PLANTS. P. W. Sherwood. Can. Textile J. 77: 61-62 (June 24, 1960). (3244)

The sources of objectionable noises in a textile mill and the methods by which they are transmitted are explained.

MILL CHECK-UP. PART 6. HOW TO SIZE UP ROVING OPERATIONS. A. L. Landau (Saco-Lowell Shops). Textile World 110: 66-68 (July 1960). (3245)

Plant and equipment F2

NEW METHODS OF DIRECT MACHINE ILLUMINATION IN THE TEXTILE INDUSTRY. Bull. Inst. Textile France No. 85: 139-143 (Dec. 1959). In French. Through BCIRA 40: 1958 (1960). (3246)

The two systems described show that this type of lighting on spinning and twisting machines and looms not only leads to increased production but also makes it possible to reduce without inconvenience the general illumination of the workroom.

DYNAMIC BALANCING. D. Patterson (W. & T. Avery Ltd). The Quality Engineer 24: 65-74 (May/June 1960). (3247)

Means of eliminating vibrations in rotating parts. This would include rolls and spindles in textile processing equipment.

SOUND SUPPRESSION IN MACHINE FOUNDATIONS. J. Sorembe. Spinner u. Weber 78, No. 3: 167 (1960). In German. Through BCIRA 40: 1955 (1960). (3248)

Means for sound suppression in machine foundations are described and illustrated by drawings.

SCIENCES G

Chemistry G1

ABSORPTION OF DETERGENTS AT THE LIQUID-LIQUID INTERFACE. PART 1. F. V. Vader (Unilever Research Lab.). Trans. Faraday Soc. 56: 1067-1077 (July 1960). (3249)

Under certain conditions, the adsorption of surfactants at the liquid-liquid and at the liquid-air interface is found to be practically independent of the surfactant concentration in a considerable concentration range below but near the critical micellar concentration. The value of the adsorption in this range, to be called saturation adsorption, is used to characterize the surface-active behavior of surfactants. This value is determined by the nature of the hydrophilic group of the surfactant, and by the interaction of this group with other polar compounds present at the interface. The shape and size of the hydrophobic group have only a minor influence on the saturation adsorption. Graph, tables, 24 refs.

ADSORPTION OF DETERGENTS AT THE LIQUID-LIQUID INTERFACE. PART 2. F. V. Vader (Unilever Research Lab.). Trans. Faraday Soc. 56: 1078-1084 (July 1960). (3250)

Saturation adsorptions of surfactants containing several hydrophilic groups, and of surfactants simultaneously adsorbed, have been determined. The results may be interpreted as being due to the interaction between the hydrations of the various hydrophilic groups present at the interface. Tables, 12 refs.

CELLULOSE DERIVATIVES. J. Cyrot. Bull. Inst. Textile France No. 85: 29-56 (Dec. 1959). Through BCIRA 40: 1965 (1960). (3251)

Cellulose derivatives (esters, ethers, etc.), the preparation and properties of which have been described in the literature, are listed alphabetically in a table, together with the formulas, the reagents used for their preparation, the methods of preparation, the properties, and the reference number of the relevant publication.

INFLUENCE OF SURFACTANTS ON PHYSICAL PROPERTIES OF FIBERS. K. Fujii, T. Kamijo, and A. Nakatsugawa. J. Soc. Textile Cellulose Inds. Japan 15, No. 11: 906-910 (1959). Through BCIRA 40: 1927 (1960). (3252)

Torsional rigidity, compressional elasticity, coefficient of friction, and softness were studied experimentally.

ABSORPTION OF WATER BY TEXTILE MATERIALS. R. Jeffries (Brit. Rayon Research Assoc.). Textile Recorder 77: 62-64 (June 1960). (3253)

A review of the literature and an account of research at the British Rayon Research Association. Graphs, 14 refs.

RADIATION-INDUCED GRAFT COPOLYMERIZATION OF METHACRYLIC ACID TO NYLON. R. Roberts and J. K. Thomas (Wantage Radiation Lab.). J. Soc. Dyers Colourists 76: 342-344 (June 1960). (3254)

The grafting of methacrylic acid to nylon 66 has been achieved by using the gamma-radiation from a ^{60}Co gamma-source. The effect of total radiation dosage and temperature on the rate of grafting is reported, and interpreted using current copolymerization concepts. The effect of the new surface on the solubility of the nylon in various solvents, and on the surface electrical resistance, is also described and discussed briefly. Graphs, table, 14 refs.

WATER UPTAKE IN RELATION TO THE TIME-DEPENDENT REDUCTION OF THE ZETA POTENTIAL OF FIBERS IN WATER. K. Kanamaru. Kolloid Z. 168, No. 2: 115-121 (1960). In German. Through BCIRA 40: 1925 (1960). (3255)

A good correlation has been found between the amount of water sorbed by fibers and the decrease of the zeta-potential as a function of time. Assuming that the water uptake of the fiber takes place according to a monomolecular reaction, a qualitative expression was found for the above correlation.

ANNUAL REVIEW OF THE LITERATURE ON FATS, OILS, AND DETERGENTS. I. I. Rusoff. J. Am. Oil Chemists Soc. 37: 223-242 (May 1960); 329-358 (July 1960). (3256)

This review brings up-to-date the previous review published in May 1958.

BEHAVIOR OF NONAQUEOUS DRY CLEANING DETERGENTS. PART 1. E. Hirschhorn (R. R. Street & Co.). Soap Chem. Specialties 36: 51-54 (July 1960). (3257)

The detergent's ability to carry water in micellar form is shown to be the key to safe and efficient dry cleaning systems. X-ray data, ultracentrifugal data, viscosity data, density data, and conductance data are reviewed. Graphs, 16 refs.

Physics G2

STATIC ELECTRICITY ON TEXTILES. H. vom Hove. Textil-Rundschau 15, No. 3: 109-121 (1960). In German. Through BCIRA 40: 2133 (1960). (3258)

In this review, the author discusses the theories on the generation of static electricity on textiles, electrostatic charges in textile plants and means for their elimination, the behavior and effect of the surrounding atmosphere on textile processing, and the utilization of static electricity in flock printing. 13 refs.

EFFECT OF IONIZING RADIATIONS ON CELLULOSE. R. Imamura and H. Mizukami. J. Soc. Textile Cellulose Inds. Japan 15, No. 11: 931-938 (1959). In Japanese. Through BCIRA 40: 1980 (1960). (3259)

Cotton linters and sulfite pulp were examined. X-rays, thermal neutron, and gamma radiation cause degradation, but the atmosphere in which the cellulose is stored after irradiation influences the rate and extent of degradation; thus, no change in intrinsic viscosity is observed when wood, previously irradiated, is kept in nitrogen or oxygen-free water vapor.

SPONTANEOUS IGNITION OF WOOL. PART 3. CALORIMETRY OF SLOW OXIDATION REACTIONS IN MATERIALS OF LOW THERMAL CONDUCTIVITY. I. K. Walker and W. J. Harrison. J. Appl. Chem. 10: 266-276 (June 1960). (3260)

A method is described for calorimetry of oxidation reactions in porous materials of low thermal conductivity. The method was used to measure the temperature coefficient of the reaction between dry pie wool and dry air, using calculated values of thermal conductivity. Measurements were made at reaction rates as low as 7×10^{-6} cal/sec/g. Even if the thermal conductivity of the material is not known, this method measures the ratio of reaction rate to thermal conductivity; and this ratio is of more fundamental importance in the spontaneous ignition of large piles of material than is the reaction rate itself. Diagr, graphs, tables, 16 refs. For part 2 see abstr. 10/60.

MISCELLANY H

MARKETING IN THE COMING DECADE. J. L. Bitter (Am. Enka Corp.). Am. Textile Reptr. 74: 11, 37 (June 30, 1960). (3261)

The importance of marketing research in the profitable merchandising of new fibers is discussed.

APPRAISAL OF MARKETING RESEARCH IN TEXTILE INDUSTRY. L. S. Liang. Am. Textile Reptr. 74: 9, 35-36 (June 30, 1960). (3262)

WATER. J. P. Baum (J. P. Stevens & Co.). Textile Inds. 124: 133-134 (July 1960). (3263)

The need for a water conservation program is emphasized.

FOUNDING OF THE JAPANESE SYNTHETIC-TEXTILE INDUSTRY. A. D. Walton (Univ. Coll. of North Staffordshire). J. Textile Inst. 51: P275-P286 (June 1960). (3264)

The paper is concerned with the manufacture of nylon, Vinylon, polyvinylidene chloride, polyvinyl chloride, polyacrylonitrile, and polyester fibers in Japan. Tables, 32 refs.

CENTRALIZED WORK PREPARATION IN A TEXTILE PLANT COMPRISING ALL PRODUCTION STAGES. W. Menzel. Spinner u. Weber 78, No. 3: 156-163 (1960). In German. Through BCIRA 40: 2010 (1960). (3265)

An example is given of the structure of a central organization of work in a complete textile plant, pointing out particularly the individual functions in relation to the total work to be effected, and the importance of fixing the working sphere for the personnel dealing with work preparation and of the constant harmonious co-operation between commercial and technical personnel.

COTTON RESEARCH CLINIC, 1960: HIGHLIGHTS. Textile World 110: 118-123 (July 1960). (3266)

INDIAN TEXTILE MACHINERY INDUSTRY: REPLACEMENT PROSPECTS FOR SPINNING MACHINERY. K. S. Iyengar. Indian Textile J. 70: 317-322 (Mar. 1960). (3267)

PATENT CHECKLIST

U.S. patents may be obtained from the U.S. Patent Office, Washington 25, D.C., for 25¢ a copy. Photostatic copies of foreign patents are also available. Charges for these photostats are based on the number of pages in the patent.

FIBERS A

Natural fibers A1

SELF-PROPELLED FIBER HARVESTING AND DECORTICATING MACHINE. J. E. Cary, R. E. Shafer, and V. Cary. USP 2 939 181, June 7, 1960. (3268)

In a stalk-moving conveyor, the bed of which is made up of a series of uniformly spaced V-belts the V-belts are used to feed the stalks to a pair of feed or crushing rolls.

Manmade fibers A2

ALL-SKIN VISCOSE FILAMENT PRODUCTION. R. L. Mitchell, J. W. Berry, and W. H. Wadman (to Rayonier Inc.). USP 2 937 922, May 24, 1960. (3269)

POLYESTER YARNS AND FILAMENTS OF IMPROVED DYE RECEPTIVITY. F. E. Spellman, Jr. (to E. I. du Pont de Nemours & Co.). USP 2 942 325, June 28, 1960. (3270)

Undrawn polyester yarns and filaments are heated to 140-180° C for a few seconds and then drawn at a temperature of 95-115° C using a higher than normal draw ratio.

YARN PRODUCTION B

CRIMPING APPARATUS. H. Perlinger and H. Richter (Germany). BP 830 702, Mar. 16, 1960. (Addition to BP 818 000). Through BCIRA 40: 1850 (1960). (3271)

The application of a double-twist spindle as a false-twisting device is made a continuous operation. (See abstr. 2099/60).

FALSE TWIST CRIMPING OF FILAMENTS. D. F. Arthur and A. F. Weller (to Brit. Nylon Spinners Ltd). USP 2 936 570, May 17, 1960. (3272)

In a process for crimping filaments by frictional contact with a nonabrasive surface of a rotating twist tube, optimum conditions for twist insertion are cited as they relate to filament speed, tube rotation speed, and filament input and output tensions for any given dimensions of the tube and the angles of entry and exit made with it by the filament.

CRIMPING APPARATUS FOR THERMOPLASTIC YARN. D. Starkie (to English Rose Ltd). USP 2 938 258, May 31, 1960. (3273)

Stretch type thermoplastic yarn is manufactured by feeding it to a crimping station through a vibrating device between a pair of traveling surfaces which hold it in its crimped form until it is set by heat treatment.

STRAND PROCESSING. D. S. Adams and J. F. Bowling (to E. I. du Pont de Nemours & Co.). USP 2 936 877, May 17, 1960. (3274)

Mechanism for drawing off strands traveling at high speeds and depositing them in the form of coils or loops traveling at a much lower speed.

FALSE TWIST CRIMPING DEVICE. A. Dobson (to Ernest Scragg & Sons Ltd). USP 2 939 269, June 7, 1960. (3275)

The device consists of two pairs of rollers positioned so as to form similar cusps in which the yarn to be twisted is run and deflected from the straight line between the cusps by a third roller.

COTTON WEIGHING MACHINE. G. W. Roach and J. M. Clark. USP 2 939 569, June 7, 1960. (3276)

The machine has incorporated with it conveyor assemblies for handling cotton bales to facilitate their tagging, weighing, and sampling.

HACKLING MACHINE. W. R. Stewart (to William R. Stewart & Sons (Hacklemakers) Ltd). USP 2 940 129, June 14, 1960. (3277)

The body of the hackle stock is made of aluminum and the pins are mounted so that they extend into the stock by a distance which is less than the thickness of the stock as a whole.

TOW HANDLING AND LAYING APPARATUS. K. H. Anthony (to Industrial Rayon Corp.). USP 2 940 157, June 14, 1960. (3278)

BEATING DEVICE FOR OPENING COTTON FIBER BALES. R. Huber, R. Wildbolz, and C. Just (to J. J. Rieter & Co. Ltd). USP 2 942 304, June 28, 1960. (3279)

CRIMPING APPARATUS. H. Freiberger (to Elwood Research Co.). USP 2 943 377, July 5, 1960. (3280)

Heated filaments are passed over feed rolls, one of which is vibrating transversely and the other lineally to the direction of the filaments.

HEATING DEVICE FOR FILAMENTS. H. Crouzet (to Moulinage et Retorderie de Chavanoz). USP 2 944 319, July 12, 1960. (3281)

The heating element consists of two parts so that the part which is located in the temperature zone where vapors condense to form a solid deposit can be removed for cleaning.

POLYMERIZED FATTY ACIDS FOR LUBRICATING AND PROMOTING COHESION OF FIBERS. W. H. Shields and H. T. Buckley (to Emery Inds.). USP 2 944 920, July 12, 1960. (3282)

The viscosity of the polymerized acids is controlled by the use of an oily diluent.

Opening, picking, fiber preparation B1

BOX FEEDER. J. E. Fleissner (to Fleissner & Co. GmbH). USP 2 939 182, June 7, 1960. (3283)

The stripping device associated with the belt conveying fibers upward in a box feeder consists of a plucking or picking drum rotating at high speed and provided with needles moving in the opposite direction from the conveyor belt for removing superfluous material.

FIBER OPENING MACHINE. A. Boer (to Bancroft-Brillotex Intern. SA). USP 2 942 306, June 28, 1960. (3284)

The machine consists of a series of superposed endless belts mounted on grooved rolls. Successive pairs of belts travel at increasing speeds and the grooves are of decreasing size as the fibers approach the discharge end of the machine.

COTTON CLEANER. A. Hergeth and H. Hergeth (to Hergeth Maschinenfabrik und Apparatebau KG). USP 2 943 360, July 5, 1960. (3285)

Horizontal cleaners are equipped with a number of small baffles between the conventional partitions to repeatedly stop and then accelerate the movement of the fibers.

Carding and combing B2

CARDING ENGINES. J. H. Clayton. BP 830 199, Mar. 9, 1960. Through BCIRA 40: 1840 (1960). (3286)

The invention relates to a doffer comb that is oscillated during doffing by an eccentric and an oscillating lever mounted on the shaft. The lever is of generally U-shape and has a boss the bore of which ends in a recess that houses a clamping block for the doffer comb shaft.

CARD CLOTHING. E. Tempest and G. H. Tempest (to Joseph Sellers & Son Ltd). USP 2 939 183, June 7, 1960. (3287)

Wire teeth are constructed and set into the foundation in such a way that the teeth of one roller will automatically clean the teeth of a coacting roller during machine operation.

MEANS FOR CONNECTING ECCENTRIC TO APRON SECTION IN A TAPE CONDENSER. I. C. Howes (to Davis & Furber Mach. Co.). USP 2 940 132, June 14, 1960. (3288)

Construction which permits the replacement of a broken eccentric shape without removing the eccentric shaft and other eccentric straps.

REVOLVING COMB FOR COMBING MACHINES. G. Bettoni (Italy). USP 2 941 260, June 21, 1960. (3289)

The comb carrying bars may be easily replaced on the semi-cylindrical frame without the use of screws or welding.

DOFFER COMB BLADES FOR CARDING MACHINERY. J. D. Hollingsworth. USP 2 942 305, June 28, 1960. (3290)

The blade is wider than the conventional blade and bent so as to form a lip extending away from the carding rolls to prevent stock from being deflected back onto the carding rolls.

Drawing and roving B3

WEIGHTING TOP DRAFTING ROLLS. L. Malcolm (to T. M. M. (Research) Ltd). BP 829 829, Mar. 9, 1960. Through BCIRA 40: 1843 (1960). (3291)

A radial loading force is applied to the journals or arbors of a set of upper drafting rolls by means of a loading arm that carries resilient means (compression springs or blocks of rubber) and can be locked in its operative position.

APRONS FOR WOOL DRAWING FRAMES. W. R. Brooksbank. BP 830 131, Mar. 9, 1960. Through BCIRA 40: 1845 (1960). (3292)

The inventor refers to the bedding or fluting period in the life of a new jointed apron running between fluted rollers and conveying fiber (e. g. in the combing, finishing, or gilling of wool), and claims to reduce this period by forming the apron with at least one flute across the splice where tapered ends of the apron are joined by an adhesive.

TOP DRAFTING ROLLS. Officina Meccanica Sant' Andrea Novara SpA. BP 830 324, Mar. 16, 1960. Through BCIRA 40: 1842 (1960). (3293)

The invention concerns the problem of making a top roll from a thick resilient material and yet securing uniform nip pressure from end to end of the roll. The core of the roll is fitted with two rings or ribs near the ends and the resilient sleeve is stretched over these protuberances.

COMBING MACHINES. K. A. Nuttall and K. R. Gillespy (to T. M. M. (Research) Ltd). BP 830 991, Mar. 23, 1960. Through BCIRA 40: 2075 (1960). (3294)

In means for supporting the upper drafting and calender rollers in the draw box of a rectilinear comber, the roller bearings are mounted upon two arms that can be raised together as a unit in pivotal motion from their operative position to give access to the lower rollers.

SCREW GILL BOXES. M. Hill (to James Mackie & Sons Ltd). USP 2 938 240, May 31, 1960. (3295)

Pusher mechanism for acting on each successive faller to push it away from the guides which control the fallers during their transfer from the feed screws to the return screws.

TUBE GEAR MOUNTING FOR LARGE CAN SLIVER COILER. D. K. Scott (to So. States Equip. Corp.). USP 2 940 136, June 14, 1960. (3296)

MACHINE FOR STRETCHING TEXTILE SHEETS INTO SLIVERS. L. F. Guimbretiere, A. Pollet, and E. J. Sorez (France). USP 2 938 241, May 31, 1960. (3297)

Machine for drawing a sheet of non-continuous fibers by grasping, in succession, the ends of the fibers at the front edge of the sheet through a depth equal to a predetermined fraction of the average fiber length, drawing out the grasped fibers, and regrouping them with partial overlapping into the shape of a sliver.

SLIVER CAN. W. H. Watson and W. Slater (to T. M. M. (Research) Ltd). USP 2 939 184, June 7, 1960. (3298)

The slivers are coiled in separate compartments of a rectangular can, the combined width of all the compartments being equal to the width of the drawframe from which the slivers are fed.

TOP DRAFTING ROLL POSITIONING AND WEIGHTING. P. B. Tarbox (to Saco-Lowell Shops). USP 2 940 130, June 14, 1960. (3299)

Structure for drafting mechanism of the short apron type in which none of the elements are supported by capbars and in which the top front and rear rolls are allowed to swing sufficiently freely in the transverse direction to permit their self-alignment with their cooperating bottom rolls.

DRAFTING APPARATUS STRAND DELIVERY DEVICE. J. J. McCann (to Pot Spinning Corp.). USP 2 941 261, June 21, 1960. (3300)

Apparatus for presenting fibers in progressive order to the nip of the delivery rolls by continuously maintaining the relative position of the fibers of a strand until they are gripped in the nip of the delivery rolls.

ROVING DRAFTING MECHANISM. R. Balmes Solanas (to Estirajes Balmes SA). USP 2 943 364, July 5, 1960. (3301)

Small diameter fiber guide rolls which permit the slipping of only those fibers already engaged by the delivery rolls.

DRAFTING ROLL SUPPORT FOR DRAWING FRAMES. J. L. Blalock (to Piedmont Mach. Shop). USP 2 944 301, July 12, 1960. (3302)

Roll support in which substantially all of the weight imposed on the top rolls is carried by the roll stand independently of the bottom rolls and which permits a predetermined spaced relationship to be maintained at all times.

DRAWING FRAME STOP MOTION MECHANISM. P. B. West (to Saco-Lowell Shops). USP 2 944 302, July 12, 1960. (3303)

Stop motion mechanism responsive to the improper transfer of the sliver between the drafting element and trumpet and adapted to operate independently of sliver tension.

Spinning, winding, twisting B4

COMBINED TWISTING AND CONING APPARATUS. O. V. Drtina. USP 2 940 244, June 14, 1960. (3304)

DEVICES FOR WINDING SLIVER AND SLUBBING ON CROSS-WOUND BOBBINS. H. Zobel, W. Barthel, and H. Sammler (to VEB Spinnereimaschinenbau). BP 830 206, Mar. 9, 1960. Through BCIRA 40: 1841 (1960). (3305)

To maintain the appropriate distance between the winding point on the bobbin and the point of delivery of the sliver or slubbing a nozzle and a funnel are provided on a swing rest that pivots about a vertical axis. The funnel is at a fixed point but the nozzle is in a slidable carriage and automatically maintains its distance from the funnel.

BRAKE FOR SPINNING AND TWISTING SPINDLES. Wuerttembergische Spindelfabrik GmbH. BP 830 291, Mar. 16, 1960. Through BCIRA 40: 1848 (1960). (3306)

The brake is mounted on the inside of the top of a housing that is hinged at the bottom and encloses the lower parts of the spindle. It consists of a pair of shoes mounted on a spring yoke, and is operated from above the housing by means of a handle that can be turned in both horizontal and vertical planes.

FILTER BOX FOR USE IN REMOVING BROKEN THREADS FROM THE SPINNING MACHINE BY SUCTION. H. Thoma Co. BP 830 338, Mar. 16, 1960. Through BCIRA 40: 1849 (1960). (3307)

The motor and impeller assembly is mounted in the filter box near to its center of gravity so that moments leading to stresses and oscillations are reduced to a minimum. The box is divided by a partition into a suction chamber, and a pressure chamber and the motor and impeller are mounted by means of an annular plate in the partition.

TRAVERSE MECHANISM FOR EFFECTING RECIPROCATING MOTION OF RELATIVELY LARGE MASSES. H. Schönherr and W. Steinbach (to VEB Spinnerei und Zwirnerei Maschinenbau). BP 830 611, Mar. 16, 1960. Through BCIRA 40: 1847 (1960). (3308)

In some machines for spinning synthetic yarns, thread guides have to be moved by relatively long rods worked by eccentrics at one end of the machine, and vibration occurs. It is now proposed to work the rods, in opposite directions, by a pair of grooved drums and cam-driven sliding carriages at the center of the machine.

WEIGHTING DEVICE FOR SPINNING MACHINE DRAFTING ROLLS. Wuerttembürgische Spindelfabrik GmbH. BP 830 614, Mar. 16, 1960. Through BCIRA 40: 1844 (1960). (3309)

A single- or multi-part saddle with its rollers is not only loaded but also guided and located in the horizontal plane by a single spring, of leaf or round section, that constitutes the only connection between the saddle and a support member of the drafting mechanism. One end of the spring is pivoted to the saddle or adopted to fit in a recess, so that the saddle can pivot but not move lengthwise. The other end is fixed to the support member which can be rotated and locked at desired points in respect to a fixed member of the frame of the machine.

CAP SPINNING AND TWISTING MACHINES. J. R. Leighton (to Prince-Smith & Stells Ltd). BP 831 140, Mar. 23, 1960. Through BCIRA 40: 2076 (1960). (3310)

The cap is mounted upon a spindle with the aid of a resilient sleeve to damp vibrations.

DRAFTING APPARATUS FOR WOOL SPINNING. W. H. Watson (to T. M. M. (Research) Ltd). BP 830 616, Mar. 16, 1960. Through BCIRA 40: 1846 (1960). (3311)

To increase the draft in woolen spinning without the risk of irregular yarn, the usual low-draft zone with false-twist tube is preceded by another drafting device, which may include an apron or another false-twist tube.

TWISTING SPINDLE BALLOON CONTROL. A. W. Vibber. USP Reissue 24 840, June 14, 1960. Original No. 2 851 848, Sept. 16, 1958. (3312)

TWO-FOR-ONE YARN TWISTER TENSION DEVICE. A. W. Little (to Am. Viscose Corp.). USP 2 936 566, May 17, 1960. (3313)

Device by means of which the tension applied to the yarn may be adjusted by merely rotating a hand control supported on the twisting apparatus.

DRAW TWISTER. J. E. Bromley (to Chemstrand Corp.). USP 2 937 489, May 24, 1960. (3314)

The twister utilizes a flexible coupling between the feed roll shafts and drive to reduce torsional vibration to a minimum and improve quality and uniformity of the synthetic filaments processed.

TOP DRAFTING ROLL ASSEMBLY FOR SPINNING MACHINES. A. Schiltknecht (to J. J. Rieter & Co. Ltd). USP 2 938 242, May 31, 1960. (3315)

Loosely fitted spring ring for axially securing the bearing unit into the carrier of the top drafting roll cover.

TOP DRIVE SPINDLE. G. H. Magrath. USP 2 938 676, May 31, 1960. (3316)

Means for centering a bobbin on a spindle blade and driving the centered bobbin independently of the spindle whorl neck.

PLYING MECHANISM. N. E. Klein (to Deering Milliken Research Corp.). USP 2 939 267, June 7, 1960. (3317)

The strands from the two or more supply packages are brought together for plying at the balloon apex making possible substantially constant yarn tension in the balloon.

DOUBLE-TWIST SPINDLE. K.-H. Rehn (to Barmer Maschinenfabrik AG). USP 2 939 268, June 7, 1960. (3318)

The frictional forces between the yarn and calotte-shaped yarn guide surface are minimized by means of a series of arcuate ridges, concentric with the axis of rotation of the twisting head, on the yarn guide surface contacted by the yarn.

SPINDLE TAPES. W. T. Martin (to Celanese Corp.). USP 2 939 270, June 7, 1960. (3319)

Tape of excellent frictional characteristics and wear life is made of a woven cellulose fabric impregnated with a resinous copolymer of vinyl acetate and another monoethylenically unsaturated ester of a carboxylic acid, e.g. dibutyl fumarate.

CENTRIFUGAL SPINNING FUNNEL. H. P. Verschragen (to Am. Enka Corp.). USP 2 940 243, June 14, 1960. (3320)

The discharge end of the spinning funnel has a series of projections and depressions separated by an annular groove into which liquid accumulates to reduce the friction generated by the thread passing over the discharge end.

SPINNING RING. L. R. Ladd. USP 2 940 245, June 14, 1960. (3321)

Self-lubricating ring in which the traveler guiding annulus is of porous oil-absorbent material and which has an improved reservoir closure.

CENTRIFUGAL CLUTCH FOR SPINDLES. L. Birkigt (to Brevets Aero-Mecaniques SA). USP 2 940 246, June 14, 1960. (3322)

Means are provided for creating a residual torque when the spindles are braked to permit the spindles to start revolving again as soon as they are no longer braked.

PENDULOUS ROTATABLE BOBBIN HOLDER FOR SPINNING FRAMES. G. S. Spencer (to Bendix Aviation Corp.). USP 2 940 684, June 14, 1960. (3323)

CRADLE FOR TOP ROLLS OF DOUBLE APRON DRAFTING ARRANGEMENTS IN SPINNING MACHINES. A. Schiltknecht (to J. J. Rieter & Co. Ltd). USP 2 941 262, June 21, 1960. (3324)

TOP DRAFTING ROLL CARRIER FOR SPINNING FRAMES. F. Kübler (to SKF Kugellagerfabriken GmbH). USP 2 941 263, June 21, 1960. (3325)

Carrier arm which permits rapid adjustment of the distance between nip points of the top and bottom rolls, as well as weighting of the individual top rolls.

DOUBLE APRON DRAFTING ARRANGEMENT FOR SPINNING MACHINES. A. Schiltknecht and F. Cousin (to J. J. Rieter & Co. Ltd). USP 2 942 307, June 28, 1960. (3326)

Adjustable means for guiding and reversing the lower apron.

TRANSFER TAIL FORMING DEVICE FOR BOBBIN TWISTER. J. M. Elliott and J. U. Gray (to Courtaulds (Canada) Ltd). USP 2 942 403, June 28, 1960. (3327)

PNEUMATICALLY DRIVEN FALSE TWIST SPINDLES. A. W. Ward and J. R. Wylde (to Brit. Celanese Ltd). USP 2 942 405, June 28, 1960. (3328)

BRAKE FOR SPINNING AND TWISTING SPINDLES. K. Ellinger (Germany). USP 2 942 406, June 28, 1960. (3329)

SPRING-LOADED TENSIONING STIRRUP FOR LOWER APRONS OF DRAFTING SYSTEMS IN SPINNING MACHINES. W. Hampl (Germany). USP 2 944 299, July 12, 1960. (3330)

PLASTIC TRAVELER WITH WEAR RESISTANT ROLLER. L. H. Morin (to Coats & Clark Inc.). USP 2 942 407, June 28, 1960. (3331)

The roller is positioned in that part of the traveler hook end which engages the yarn.

CAPBAR-LESS SPINNING FRAME APRON GUIDE. L. M. Cotchett (to Machinecraft, Inc.). USP 2 943 361 and 2 943 362, July 5, 1960. (3332)

TOP DRAFTING ROLL CARRIER FOR SPINNING MACHINES. E. Dausch (Germany). USP 2 943 363, July 5, 1960. (3333)

Hand releasable catch for maintaining the top roll carrier in its operative position.

SUSPENSION TYPE BOBBIN HOLDER. R. K. Whitehead, Sr. and R. K. Whitehead, Jr. USP 2 943 812, July 5, 1960. (3334)

PLASTIC TOP DRAFTING ROLL CRADLE FOR SPINNING FRAMES. K. P. Swanson. USP 2 944 300, July 12, 1960. (3335)

STARTING CONTROL DEVICE UPTWISTER. H. A. Batty and T. G. Pullen, III (to James Lees & Sons Co.). USP 2 944 382, July 12, 1960. (3336)

To permit the spindles to achieve full speed before starting the takeup roll drive.

SUSPENSION TYPE BOBBIN HOLDER. M. E. Peterson (to Bendix Aviation Corp.). USP 2 944 760, July 12, 1960. (3337)

Yarns B5

APPARATUS FOR THE PRODUCTION OF VOLUMINOUS YARNS. A. Richmond and A. H. Gentle (to Brit. Celanese Ltd). BP 830 345, Mar. 16, 1960. Through BCIRA 40: 1851 (1960). (3338)

A jet for subjecting a yarn to the action of a turbulent fluid stream comprises an elongated chamber, an entry passage for the yarn, and an outlet passage that extends back into the chamber so as to leave all round it a space into which the fluid (compressed air) is admitted.

CORE YARN. B. Gylfe. BP 830 382, Mar. 16, 1960. Through BCIRA 40: 1852 (1960). (3339)

Yarn for tricot and other fabrics is made by twisting wool or cotton yarn around a straight core of continuous filament crepe yarn, e.g. nylon.

PHOSPHORESCENT ROPE. A. Nadel (to Standard Yarn Co.). USP 2 939 271, June 7, 1960. (3340)

Rope in which the phosphorescent material does not directly contact the fibers of the rope is made by winding phosphorescent filaments through and along the rope strands, the phosphorescent filaments composed of a layer of phosphorescent material sandwiched between a pair of bonded plastic strips.

COMPOSITE STRETCH YARN. W. C. Mull (to Sellers Mfg. Co.). USP 2 936 569, May 17, 1960. (3341)

A multifilament, thermoplastic, heat set, torque stretch yarn is plied with a spun staple yarn which has been twisted in the same direction as the torque in the thermoplastic yarn.

LIGHT REFLECTING YARNS. P. H. Carey, Jr., E. P. Davis, and P. V. Palmquist (to Minn. Mining & Mfg. Co.). USP 2 937 668, May 24, 1960. (3342)

The yarns consist of a flexible core yarn coated with a binder layer in which is bonded a surface layer of half-embedded, silver-plated, glass microspheres.

APPARATUS FOR MAKING BULKED YARN. E. K. Bauer and W. D. Shumaker (to Am. Viscose Corp.). USP 2 938 256, May 31, 1960. (3343)

Apparatus in which individual filaments of a continuous multifilament yarn are separated from each other and swirled into ring-like loops at random intervals by an expanding fluid stream.

BULKED YARN MANUFACTURE. E. K. Bauer (to Am. Viscose Corp.). USP 2 938 257, May 31, 1960. (3344)

Lacing apparatus for swirling or whipping into convolutions or loops individual continuous filaments of an endless multifilament yarn.

TREATMENT OF DACRON FOR USE IN TIRE CORDS. S. Salem and R. E. Bingham (to Gen. Tire & Rubber Co.). USP 2 938 823, May 31, 1960. (3345)

Dacron fibers suitable for use in tire cords are obtained by dipping the fibers in an adhesive solution and drying and heat setting without elongation at high temperatures for short periods of time.

METHOD FOR APPLICATION OF LIQUID TREATMENT TO CORD DURING TWISTING. R. L. Lang (to Callaway Mills). USP 2 940 248, June 14, 1960. (3346)

The apparatus consists of a ring immersed in a treating liquid and, spaced vertically above the ring above the liquid level, a first and second compressor. A first portion of yarn ends are passed directly through the first to the second compressor without wetting; the remaining yarn ends pass through the ring immersed in the liquid directly to the second compressor. The excess liquid is stripped from the wet yarn ends as they reach the second compressor onto the dry yarns approaching it, and the combined yarns are twisted after passing through the second compressor.

CRIMPED SYNTHETIC YARN FOR USE IN THE LACE INDUSTRY. J. Vandevoorde (to Masurel Mills, Inc.). USP 2 942 408, June 28, 1960. (3347)

The yarns are formed by combining crimped individual filaments substantially free of twist, twisting the filaments together to a predetermined state of bulk, setting, and sizing.

PERFORATED METAL BOBBIN FOR YARN DYEING. C. W. Cederberg (to Larson Tool & Stamping Co.). USP 2 942 801, June 28, 1960. (3348)

RIMMED PLASTIC SEWING THREAD SPOOL. L. H. Morin (to Coats & Clark Inc.). USP 2 944 757, July 12, 1960. (3349)

The main portion of the spool is made of inexpensive plastic and is shaped to receive a molded rim of more expensive material.

FABRIC PRODUCTION C

Warping, slashing, yarn preparation C1

SLUB CATCHERS FOR WINDING FRAMES. P. G. Noble (to R. P. Lawson & Sons Ltd). BP 830 160, Mar. 9, 1960. Through BCIRA 40: 1867 (1960). (3350)

To prevent the yarn from ballooning out of a slub catcher, a two-armed lever is pivoted on the catcher so as to depend across the open end of the slit or groove.

THREAD GUIDES. J. W. Maysh (to United Insulator Co. Ltd). BP 830 264, Mar. 16, 1960. Through BCIRA 40: 1866 (1960). (3351)

An open helix of ceramic material, at least 1-1/2 turns, is cemented (by means of Araldite) to a wire support.

HIGH SPEED WINDING OF YARNS. E. Scragg & Sons Ltd. BP 830 363, Mar. 16, 1960. Through BCIRA 40: 1865 (1960). (3352)

Appropriate changes in spindle speed as the package builds up are effected by using a photocell device as sensing means.

AUTOMATIC BOBBIN WINDING MACHINE. W. Reiners (Germany). BP 830 978, Mar. 23, 1960. Through BCIRA 40: 2081 (1960). (3353)

The invention relates to means for dealing with the leading end of thread on a new bobbin other than leaving it to trail. After being severed from the preceding full bobbin the free end is presented to a gripping device that rotates with the bobbin. This holds the end until the bobbin has started rotation but releases it before the bobbin has got up speed and deflects it into the path of the thread leading to the bobbin. The free end is thus carried by the thread and wound into the first few turns being laid down on the bobbin.

LEASING DEVICE. R. Stöck (to Maschinenfabrik Benninger AG). USP 2 938 259, May 31, 1960. (3354)

In warping machines having a split rod frame for the split rods, the split rod frame is mounted on the lease reed support so that the split rods are positioned immediately in front of the lease reed. This permits the split rod frame to be hinged to the reed support so that it can be swung away to bring all ends passing through the lease reed into one plane.

WARP WINDING APPARATUS. W. C. Mason. USP 2 940 687, June 14, 1960. (3355)

Apparatus for winding one or more yarn strands into a predetermined number of warp strands of equal length in a definite order to permit the strands to be conveniently applied to a loom.

STRIPPING DEVICE FOR LOOM WEFT BOBBINS. G. Röhl (Germany). USP 2 941 278, June 21, 1960. (3356)

The stripping jaws are carried by endless chains with means for accommodating bobbins of different diameters and cone angles.

DEVICE FOR CLAMPING THE THREADS OF A WARP. A. Altenweger (to Zellweger AG). USP 2 942 324, June 28, 1960. (3357)

The device consists of a comb and a clamp for pressing the warp threads into the gaps between the comb teeth.

COMPACT THREE DIAMETER KNOT FOR FLEXIBLE OR SLIPPERY FILAMENTS. J. Norton (to Leesona Holt Ltd). USP 2 942 904, June 28, 1960. (3358)

WINDING MACHINE TRAVERSING ROLL. W. V. Henry (to Am. Enka Corp.). USP 2 943 803, July 5, 1960. (3359)

The outer, yarn-contacting edges of the helical cam groove are channeled and a wear-resistant guide wire embedded in these channels, and both radial and axial guide pins are provided at each of the rapid reversal sections.

YARN GUIDES. F. R. Cass. USP 2 943 813, July 5, 1960. (3360)

Porcelain holder for yarn guide made of a synthetic material of great hardness, such as alumina, sintered aluminum oxide, or corundum.

Weaving C2

HEDDLE FRAMES. I. Maruyama (Japan). BP 829 751, Mar. 9, 1960. Through BCIRA 40: 1872 (1960). (3361)

Heddle frame that consists of two rectangular frames, a stout outer frame on which a second frame carrying the heddles can be quickly fixed by an unskilled operative. Apparently a number of second frames are held in reserve, with the heddles already threaded.

WEFT BOBBINS. E. Redaelli. BP 830 166, Mar. 9, 1960. Through BCIRA 40: 1868 (1960). (3362)

The invention relates particularly to a weft bobbin for a shuttle which itself reveals the approaching exhaustion of the weft. The bobbin has two cylindrical parts mounted end to end on a spindle and urged apart by a spring. The spring remains ineffective until there is not sufficient weft to hold the two parts together.

LOOM TERRY MOTION. G. Schebesta. BP 830 508, Mar. 16, 1960. Through BCIRA 40: 1873 (1960). (3363)

A loose-reed loom having a reed that is normally held in a fast position as the lay moves forward on the beatup is fitted with link mechanism operated by a dobby-controlled hook member to release the reed. Preferably the link mechanism comprises a 2-armed lever pivoted to the lay sword and connected at its upper end to a link fixed to the reed shaft.

SPRING BIASED LETOFFS FOR LOOMS. C. Hudgins. USP 2 938 548, May 31, 1960. (3364)

APPARATUS FOR SELECTIVE INSERTION OF TWO OR MORE WEFT THREADS IN LOOMS. Sulzer Frères SA. BP 830 530, Mar. 16, 1960. Through BCIRA 40: 1871 (1960). (3365)

Means for guiding the weft as it is taken from either of two stationary weft packages by means of a movable feeder-changing element and passed to a gripper-type picking device.

TWO SHUTTLE, AUTOMATIC LOOM. Ateliers Houget SA and Vervietoise pour la Construction de Machines. BP 830 687, Mar. 16, 1960. Through BCIRA 40: 1870 (1960). (3366)

Means for automatically changing cops when weaving with two shuttles pick-and-pick, and for all combinations of picks in two or more colors, without preventing normal alternation of even and odd picks.

WEFT HOLDING MEANS FOR LOOMS WITH CONTINUOUS WEFT FEED. R. Dewas (France). USP 2 938 547, May 31, 1960. (3367)

Means for effecting the holding of the weft yarn by squeezing and gripping the released end between the selvage warp yarns at the moment when it is released by the weft feeder.

LOOM WARP TENSION DEVICE FOR WEAVING MULTIPLE-PLY FABRICS. K. Metzler (Germany). USP 2 939 489, June 7, 1960. (3368)

BOBBIN CHANGING DEVICE FOR TWO-SHUTTLE LOOM. E. A. Stauder (to Jean Gusken Maschinenfabrik). USP 2 939 490, June 7, 1960. (3369)

LOOM REED STRUCTURE. S. F. McLane (to So. Loom Reed Mfg. Co.). USP 2 941 552, June 21, 1960. (3370)

The reed end bars are provided with beveled outer edges, so that if the shuttle strikes an end bar it will slide harmlessly off the bevel without damaging either the reed or the shuttle.

JACQUARD LOOM. C. T. Dracup and G. Dracup (England). USP 2 942 626, June 28, 1960. (3371)

For semi-open shed weaving in which a particular warp thread remains in the up position for two or more picks, the loom is provided with additional bars arranged to lie between the rows of hooks so that for one pick they engage the hooks in one row and on the next pick the hooks in the other row.

LAY MECHANISM. J. R. McDowell. USP 2 942 627, June 28, 1960. (3372)

The guide notches are so arranged in the guides as to automatically eject any warp which might enter a notch but without damaging the warp.

SHUTTLE WITH THREAD CUTTER ATTACHMENT. J. N. Savelli (to Draper Corp.). USP 2 942 628, June 28, 1960. (3373)

The shuttle is provided with an easily mountable thread plate in its front wall to cooperate with a cutter for severing the weft yarn.

LOOM REPLENISHING MECHANISM. H. N. Thibault and R. L. Plante (to Draper Corp.). USP 2 942 629, June 28, 1960. (3374)

Timer mechanism for controlling the operation of an extractor mechanism for removing the filling bunch from the bobbin and a suction device for holding and withdrawing the filling bunch.

HEDDLE FRAME RETURN MOTION DEVICE FOR BROAD LOOMS. J. Picanol (Belgium). USP 2 943 645, July 5, 1960. (3375)

The frame is suspended at its upper corners from two resilient devices of the kind comprising a spirally wound spring with a mechanism for adjusting and releasing the spring tension.

PICKER STICK LUG CONNECTION. H. W. Thatcher (to Draper Corp.). USP 2 943 646, July 5, 1960. (3376)

Ball and socket universal connection provided with a resilient, cup-shaped stabilizing member for keeping vibration to a minimum and serving as a grease seal.

PICKER MOUNTING. J. M. Budzyna (to Draper Corp.). USP 2 943 647, July 5, 1960. (3377)

The picker is held in place on the picker stick by means of a flat strip having serrations at the side next to the stick which hold it in place but offer little resistance to assembly.

SHUTTLE BOX TONGUE. J. Picanol (Belgium). USP 2 943 648, July 5, 1960. (3378)

The tongue is pivotally supported sideways at the entrance of the shuttle box so that in its normal position the front face of the tongue lies in the plane of the shuttle-guiding surfaces and of the reed to provide an even and continuous lateral guiding surface.

FILLING TENSION CONTROL DEVICE FOR SHUTTLES. R. F. Parks. USP 2 943 649, July 5, 1960. (3379)

AUTOMATIC PATTERN CONTROL FOR HANDWEAVING LOOM. F. Schraegle (Germany). USP 2 944 569, July 12, 1960. (3380)

Double pedal device for controlling the actuation of the heddle frames in accordance with a set pattern.

METHOD AND APPARATUS FOR MAKING LOOP PILE FABRIC. W. A. Rice (to Mohasco Inds.). USP 2 944 570, July 12, 1960. (3381)

HEDDLE FRAME. E. Pfarrwaller (to Sulzer Freres SA). USP 2 944 571, July 12, 1960. (3382)

The removable intermediate stays are so connected with the upper and lower beams as to improve the frame rigidity.

SHUTTLE THREADING BLOCK TENSIONING MEANS. R. E. Dasch (to Draper Corp.). USP 2 944 572, July 12, 1960. (3383)

Knitting C3

APPARATUS FOR TURNING AND TRIMMING HOSE AND HALF-HOSE. W. H. Hall (to B. P. Hall (Textiles) Ltd). BP 831 136, Mar. 23, 1960. Through BCIRA 40: 2132 (1960). (3384)

Each form is mounted on an arm pivoted to an axle on a work table and has as its upper end a central rod that is retracted into the form for the turning operation and is projected into the toe pocket, for the trimming operation, by means of a cam plate on the work table.

CIRCULAR HOSIERY MACHINE. I. H. C. Green (to Hemphill Co.). USP 2 934 921, May 3, 1960. (3385)

The patterning possibilities in solid color hosiery machines is increased by changing the time of operation of yarn feeding levers and needle selecting mechanisms with respect to the phase of the cylinder stroke past the yarn feeding and needle selecting stations.

KNITTED PILE FABRICS. G. E. Herrnstadt (to Firth Carpet Co.). USP 2 934 924, May 3, 1960. (3386)

Loop and cut pile knit fabrics in which a single weft loop is held within a single line of warp stitches.

METHOD OF KNITTING ARGYLE PATTERNED HOSIERY. N. Levin (to Textile Mach. Works). USP 2 935 863, May 10, 1960. (3387)

In an overplaid design in which the stitches of overplaid yarns extend at forward and reverse angles to the wales, the successively formed courses of design stitches have at least one wale in common in which the overplaid yarns form tuck stitches. This results in the design lines being similar in appearance regardless of the direction in which they extend.

CIRCULAR HOSIERY MACHINES. H. S. Burdett (to G. Stibbe & Co. Ltd). USP 2 938 364, May 31, 1960. (3388)

In jacquard patterning, the needle which is to miss the yarn during the production of jacquard effects is advanced, after the appropriate selection point, to a position beyond clearing level so that the yarns supplied to it are cast over the needle hook to form floats.

ARGYLE PATTERNING MECHANISM FOR CIRCULAR HOSIERY MACHINES. H. Letzerich (to Hemphill Co.). USP 2 939 302, June 7, 1960. (3389)

HYDRAULIC DRIVE MECHANISM FOR THE THREAD GUIDE RAILS OF FLAT COULIER KNITTING MACHINES. F. Kreienbuhl and R. Ineichen (to Mach. Tool Works Oerlikon). USP 2 939 304, June 7, 1960. (3390)

DUAL CAM TRACK FOR MULTIFEED CIRCULAR KNITTING APPARATUS. L. Mishcon and A. A. Agulnek (to Supreme Knitting Mach. Co.). USP 2 941 383, June 21, 1960. (3391)

The cam tracks are located one above the other and each cooperates with the butts of a different series of needles to raise and lower the needles between selected levels at each feed.

YARN FEEDING AND CHANGING MECHANISM FOR CIRCULAR KNITTING MACHINES. A. P. Saunders (to Wildt Mellor Bromley Ltd). USP 2 940 285, June 14, 1960. (3392)

Mechanism in cylinder and dial machines for feeding to the needles different types of yarns and to effect changes from yarns of one type to yarns of another.

ELEMENT POSITIONING MEANS FOR WARP KNITTING MACHINES. J. Held (to Textile Mach. Works). USP 2 941 386, June 21, 1960. (3393)

Means for controlling the supporting bars of the knitting and yarn feeding elements to compensate for linear movements between the bars and frame structure caused by variations in temperature during operation.

FABRIC TENSIONING MEANS FOR WARP KNITTING MACHINES. F. P. Trumpio (to Textile Mach. Works). USP 2 941 387, June 21, 1960. (3394)

ELECTRICALLY OPERATED STOP MOTION FOR WARP KNITTING MACHINES. P. J. Schoenster and M. E. Ebert (to Alfred Hofmann & Co.). USP 2 941 388, June 21, 1960. (3395)

YARN TENSION EYELET FOR KNITTING MACHINERY. J. C. Baumgardner. USP 2 942 803, June 28, 1960. (3396)

DIAL SHOGGING MECHANISM FOR CIRCULAR KNITTING MACHINES. T. J. Thore (to Fidelity Mach. Co.). USP 2 943 467, July 5, 1960. (3397)

WARP KNITTING MACHINES. R. Woollett and G. Boast (to F. N. F. Machy. Mfg. Co. Ltd). USP 2 943 468, July 5, 1960. (3398)

In order to make the amount of knockover easily adjustable, the sinkers are fixed to a bar supported by a manually adjustable pivoted link extending in the direction of the needle movement.

PATTERN CONTROL MECHANISM FOR CIRCULAR KNITTING MACHINE. J. Sirmay and D. B. Brinton (to Scott & Williams, Inc.). USP 2 943 469, July 5, 1960. (3399)

Slotted selector drums or trick wheels with selectively positionable jacks in the slots.

VACUUM YARN FEEDING DEVICE FOR KNITTING MACHINES. J. E. Malloy and J. M. Ashe. USP 2 944 414, July 12, 1960. (3400)

PACKAGE FOR JACK SINKERS AND LIKE ELEMENTS FOR STRAIGHT BAR KNITTING MACHINES. L. H. Colton (to Coltex Ltd). USP 2 944 662, July 12, 1960. (3401)

Fabrics C4

HIGH TEMPERATURE BONDED GLASS FIBER INSULATION. J. P. Stalego (to Owens-Corning Fiberglas Corp.). USP 2 941 899 and 2 941 904, June 21, 1960. (3402)

COATED, IMPREGNATED, OR BONDED FIBROUS SHEET MATERIALS. Farbenfabriken Bayer AG and Carl Freudenberg KG. BP 830 088, Mar. 9, 1960. Through BCIRA 40: 1914 (1960). (3403)

Instead of using ordinary rubbers with a relatively low elasticity (Defo value 500-3,000) it is proposed to use emulsions of elastomers of the butadiene series (Defo value 6,000-12,000), which may be copolymerized with (preferably) acrylonitrile, acrylic, or methacrylic acid or styrene.

TUFTED CARPETS. W. Dawson (to Imp. Chem. Inds. Ltd). BP 830 290, Mar. 16, 1960. Through BCIRA 40: 1877 (1960). (3404)

The tufts are anchored to the woven base fabric by means of a weft thread that has been coated (by extrusion) with a plasticized vinyl chloride/vinyl acetate copolymer (e.g. Corvic plasticized with Alphanol), and heat is then applied to fuse the plastic.

BELTING. N. Lawson (to Lewis & Tyler Ltd). BP 830 343, Mar. 16, 1960. Through BCIRA 40: 1876 (1960). (3405)

Solid woven belting is made with edge cords of braided tubular material that, by reason of the stiffness and difference in tension, forms itself into loops at the welts. The assembly is then filled and coated with a flexible material such as polyvinyl chloride, the loops being embedded in the coating.

WOVEN DECORATIVE RIBBONS. Bandfabriken Breitenbach AG. BP 830 647, Mar. 16, 1960. Through BCIRA 40: 1874 (1960). (3406)

Ribbon woven with an auxiliary thread along the center or nearer one edge, or two threads near the edges, the threads being bound in only at intervals, by means of which the ribbon is readily pulled or pushed into rosettes.

NONWOVEN CELLULOSE FABRIC. H. Freudenberg and R. Freudenberg (Germany). BP 830 904, Mar. 23, 1960. Through BCIRA 40: 2128 (1960). (3407)

Nonwoven cellulosic sheet is wetted with caustic alkali containing an agent that increases its swelling power, run through a mangle, washed, and dried. The superficially swollen or dissolved fibers bond together.

APPARATUS FOR COMBINED FORMING AND HARDENING OF FELT BLANKS. M. Casse (France). USP 2 936 512, May 17, 1960. (3408)

NONPUCKERING SEAM. C. E. Reese (to E. I. du Pont de Nemours & Co.). USP 2 937 380, May 24, 1960. (3409)

A synthetic polymer thread is used which is permanently elongated by pressing with a hot iron at a temperature of at least 160° C.

FLEXIBLE METAL COATED GLASS FILAMENTS FOR ELECTRICAL CABLES. H. R. Nack (to Union Carbide Corp.). USP 2 938 821, May 31, 1960. (3410)

MOLDING APPARATUS FOR SHAPING THERMOPLASTIC FABRICS. B. Michalko (to Union Carbide Corp.). USP 2 942 297, June 28, 1960. (3411)

HIGH BOND STRENGTH FIBER LAMINATES. J. D. Nelson (to Gen. Elec. Co.). USP 2 938 822, May 31, 1960. (3412)

Phenolic resins modified by zein are claimed as the bonding agent.

EPOXY RESIN COMPOSITION FOR GLASS FIBER LAMINATES. W. R. Bailey. USP 2 938 880, May 31, 1960. (3413)

A mixture of a monoethylamine and a piperidine complex of boron trifluoride is claimed as a curing agent.

MOLDED CARPET. M. B. Penman and H. M. Fry (to Magee Carpet Co.). USP 2 939 179, June 7, 1960. (3414)

The carpet is constructed with a thermoplastic coating on the backing which when subjected to heat may be molded to conform to the contour of the floor to which it is applied.

WATERPROOF, FLAME RESISTANT ACETATE FABRIC WOVEN FROM COATED YARNS. H. Ewing and A. H. Gentle (to Brit. Celanese Ltd). USP 2 939 200, June 7, 1960. (3415)

The yarn is coated with a composition of a vinyl chloride polymer plasticized with a noninflammable plasticizer, e.g. tricresyl phosphate.

TRILOBAL FIBERS FOR USE IN CARPETS. M. C. Holland (to E. I. du Pont de Nemours & Co.). USP 2 939 201 and 2 939 202, June 7, 1960. (3416)

The fibers provide high resistance to soiling, improved dye brightness, excellent covering, and unique highlights in carpeting.

RIBBON WITH DECORATIVE EDGE. H. L. Ballard (to Burlington Inds.). USP 2 939 491, June 7, 1960. (3417)

The method described provides an ornamental edge while allowing a pair of weft threads to be woven into the fabric with each pick of the traversing mechanism.

PILE LOOP SEVERING APPARATUS FOR KNITTED CUT PILE FABRIC. B. Stevens, Jr. (to Ames Textile Corp.). USP 2 940 284, June 14, 1960. (3418)

Cut pile fabrics are made from fabrics knit by cylinder needles drawing loops of pile yarn over inside dial elements by retaining each loop fully extended on the dial element until a succeeding loop has been drawn over and then severing the bight of the first loop.

SLIDE FASTENER TAPE. J. A. Hendley (to Talon, Inc.). USP 2 940 478, June 14, 1960. (3419)

Integrally woven beaded edge tape in which a pair of cords are interwoven with double picks of the weft yarn at the edge of the tape and a pair of cords also interwoven with double picks to provide a raised portion on either side of the slider flanges to prevent foreign matter from being caught in the slider.

STRETCHING MACHINE FOR PAPERMAKERS FELTS. T. Hindle (to Scapa Dryers Inc.). USP 2 943 375, July 5, 1960. (3420)